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PART FIRST.

ORIGINAL COMMUNICATIONS.

Ovariotomy in Ohio: being the report of a Special Committee of the Ohio State Medical Society: by J. W. HAMILTON, *Special Committee on Surgery; Prof. of Surgery in Starling Medical College. Revised and re-arranged for the O. Med. and Surg. Journal.*

To THE SOCIETY:—Within the last eight months, the Chairman, who is the sole member of your Special Committee on Surgery, has had occasion to investigate twelve cases of ovarian disease. Four of these were subjected to Gastrotomy, and in one other, the question of operation is now pending. An incident of this succession of cases, has been the rigid scrutiny of the facts and statistics of the subject. These statistics were resorted to in the outset, with the ordinary degree of confidence in their correctness. The abundance of the fallacies discovered in them, however, was such as to fix attention upon Ovariotomy in our State, as the exclusive subject of this report.

On investigating the former records of this Society, what aimed to be a full statistical history of the operation up to June, 1851, by the zealous and intrepid Ovariotomist, the late lamented Dr. P. J. Buckner, was found. This table gave eleven cases: six successful, and five unsuccessful. But little progress was made in the investigation of the subject, till three cases were discovered, belonging to

Ohio, and occurring previous to the date of that report, all of which were fatal, and not included in it. One was that of Dr. Ephraim McDowell, on Mrs. Delano, of Chillicothe, in 1825; another was that of Dr. P. M. Crume, in 1848; and the third was that of Dr. Robert Thompson, occurring in 1847. These, added to those collected by Dr. Buckner, give fourteen cases as the aggregate at the date of his report, *eight* of which, instead of *five*, were fatal; making a change sufficient to give an essentially new aspect to the practical features of the subject, so far as this report is concerned.

Again: the periodical literature of our own and other States, contains at this date (June, 1859,) as contributed by Ohio, twenty-seven cases, *eighteen* successful, and *nine* unsuccessful. This is believed to represent all of the successful cases that have occurred, except a single one, that of Prof. Ackley, in 1856; while a large number that were unsuccessful are known not to have been reported. The whole does not contain an isolated unsuccessful case by a given operator. It does contain successful ones which transpired in the hands of several different operators, who subsequently had unsuccessful ones, which the record does not show.

Similar, though less glaring defects, were observed in the history of Ovariotomy in Kentucky, is given by Prof. Gross, in his history of Kentucky Surgery.

These things are mentioned, not as illustrating peculiar shortcomings on the part of our own surgeons, or those of Kentucky; nor for the purpose of maintaining that there is any thing unique in regard to this particular surgical topic; but as showing the sources of vitiation to our statistical information, on this and kindred subjects; and as pointing the society to the appropriate work of correcting these defects, as far as possible, within the sphere of its own operations.

The contemplation of the subject, accordingly, led to distrust, not only of our own contribution to it, but also of our general statistical information, of which it constitutes a part, and, probably, about a fair specimen.

What should be done in such circumstances? I had had a limited experience, which during the greater part of the time occupied in the preparation of this report, was supposed to have been sufficiently bitter and unsatisfactory. The circumstances which gave spaciousness and deceptiveness to the contribution made to the general subject in Ohio, are ubiquitously operative, being founded in human

nature; and hence the study of it affords no satisfactory indication as to the line of duty. Under such circumstances, what course should be pursued? Should that which has yielded such bitter experience be quietly abandoned? Or, in subserviency to the interests of humanity, should it be heralded—held up as a beacon to shield others from similar disaster?

To pursue the former course, is undoubtedly consonant with the dictates of human nature; to pursue the latter, is the imperative duty of the honest surgeon.

But another error was to be guarded against; that of being led estray, and the interests of humanity and science sacrificed, on the ground of an insufficient experience.

These were the circumstances and considerations, and these the feelings, in which the collection of the materials for this report originated. It was made with the determination, and for the simple purpose of ascertaining the *whole truth*, so far as Ohio and Ohio Surgeons are concerned, without bias for or against Ovariotomy, or any other course of surgical procedure. The result of this labor, sufficiently arduous, and in some particulars, far from being agreeable, is now presented to the Society; and though the barrenness of the details, in many of the cases, cannot but be occasion for the expression of deep regret; and though there may be deception as to the completeness of the following list, yet, I cannot refrain from the expression of a great degree of gratification, in being able to present the Society, the profession, and especially those surgeons who expect to assume the terrific responsibilities of Ovariotomy, a record containing all, or about all, whether fatal or successful, that has transpired in the hands of our surgeons, or within the limits of our State, which has been so prolific in this description of surgical experience.

The report embraces Ovariotomy in Ohio, whether performed by surgeons of our own, or adjoining States. It also embraces cases operated on by Ohio surgeons in adjoining States. It is aimed to include, in the list, all the cases in which the operation was merely commenced, as well as those in which the extirpation was completed. Every essential fact that could be procured, whether in reference to the previously published, or the unpublished cases is given. Merely speculative views are ignored. They can never settle the question of the admissibility of Ovariotomy as a standard operation. The time is past when a mere characterization of it as "belly ripping," will either be offered or received as final. It is too late to settle the

whole question, and satisfy the professional mind, by merely pointing to an assumed intolerance of injury, inherent in the peritoneum. The careful collection and scrutiny of *facts* is demanded—facts representing *failures*, as well as successes. The preponderance of these, whether for or against radical procedures, must settle the whole question.

It is to be supposed the Society will readily appreciate the propriety of undertaking, in its own jurisdiction, to make the collection complete. Whenever the profession can feel assured that we have made thorough work; that failures are as faithfully, if not as fully recorded, as successes; and that we have brought all of either that has transpired to the light; we will have done a most important part of the work of settling this great surgical question. Such a work is the great demand—the *sine qua non*—of the subject. Our State is now admirably adapted to it. It has probably been the scene of more Ovariotomy, in proportion to its population, than any other portion of the world. With its net-work of railroads and telegraphs, and its newspaper publications, itemizing every matter of interest, and flying through it like the leaves of autumn; with its five regular and two or three irregular medical publications; its four regular and three irregular medical colleges, and the emulation and rivalry growing out of all—these, and other circumstances, in their isolated and combined results, make our State peculiarly invitive of such labor, and especially promising of success in its accomplishment.

The sources of the material are sufficiently indicated in the course of the report.

As the most simple and convenient method, the cases are placed in connection with the names of the operators, arranged alphabetically.

HISTORY.

The honor of performing the first operation belonging to Ohio, is denied her own surgeons, and belongs to the illustrious Dr. Ephraim McDowell,* formerly of Danville, Kentucky, the great inventor and pioneer of Ovariotomy. The case was that of Mrs. Delano, of Chillicothe; the first daughter of Ohio to assume its terrific hazards, and whose heroism, it is much to be regretted, was not rewarded by success. It is not quite certain whether the operation was per-

* Gross' History of Kentucky Surgery.

formed at her residence, or that of her surgeon. Mrs. Delano visited Danville, for the purpose of consulting Dr. McDowell, about the last of October, 1826. Prof. Drake visited her, and took notes of her case, on the 11th of March, 1827, about four months and a half after the operation. It is inferred that Dr. McDowell operated at Danville, that she returned to her residence afterward, and that Prof. Drake visited her there. This was the last case in which Ovariotomy was undertaken by the great Kentuckian, and supposed to be the only case of ovarian disease, belonging to Ohio, ever operated on, except by her own surgeons.

The next case, belonging in any wise to Ohio, was that of Prof. Mussey, in July, 1828; though the patient did not belong to the commonwealth; nor did the operator till ten years subsequently. It, accordingly, only belongs to the State, from having been performed by one, who, during the greater part of a long professional career, was an Ohio surgeon. The date of Prof. M.'s second case has not been ascertained, though quite probably it was the first upon our own soil, by one of our own surgeons.

Dr. J. D. Bowles, of Harrison, Hamilton county, was the first to succeed, both in the extirpation, and in curing his patient. This was Aug. 5, 1844. Dr. P. J. Buckner next operated successfully on Mrs. Lawrence, April 14, 1848. Between this time and June, 1851, Drs. Buckner, Dunlap, and Farrell each operated twice; and Drs. Mussey, Crume, and Thompson, once.

The very brilliant and successful operations of Dr. Buckner were presented to the Ohio State Medical Society, in 1850 and 1851, in connection with a most zealous and enthusiastic advocacy of the practice. Since that time, and no doubt, in a great degree, as the result of the impetus thus given it, the operation has been performed by 16 different surgeons, in 36 cases. From first to last, it has been undertaken by 22 different surgeons, 17 of whom accomplished extirpations. Eleven surgeons have operated only a single time each.

CASES.

Case 1.—Ackley, Prof. H. A.,* recently deceased, formerly Professor of Surgery in Cleveland Medical College. This operation was performed two or three years since. A free incision was made through the abdominal parietes, and the tumor thus exposed. At this juncture, the lady being seized with a fit of coughing, the tumor was thrust from the abdomen, so as merely to hang by a pedicle of

* Letters from Prof. Delamater.

the size of a finger. This being ligated, the mass was separated by dividing it. The wound was dressed for adhesion, which occurred without an unpleasant incident. The tumor was cystic.

Case 2.—Ackley.* In 1855, Prof. A. operated in a case of "ovarian dropsy," which, at the time, gave fine promise of success. The patient was considerably shocked by the operation, but on the next day had rallied. A promising state of things continued for about three days, when she sank suddenly, and expired, on account of the supervention of abdominal hemorrhage. It was the opinion of Prof. Ackley, and also of Prof. Delamater, that this fatal hemorrhage was the result of undue traction, and consequent premature separation of the pedicle, incident to an effort to secure the stump external to the peritoneal cavity, by the use of the ligature on the pedicle.†

Case 3.—Anonymous.‡ Given without the name of the operator by agreement. He is one of the most industrious and worthy surgeons of the State.

Mrs. ——— came into the hands of the operator, suffering from dropsical distension of the abdomen. After paracentesis, a tumor, to the right of, and below the umbilicus, was observed. Several able physicians, in consultation, diagnosed ovarian disease.

When the abdomen again became distended, the operation for extirpation was commenced, with a free incision in the linea alba. A large quantity of fluid escaped, revealing the presence of scirrhus of the omentum. As there were extensive adhesions to the intestines, the operation was abandoned. The patient died within about a week.

Case 4.—Blackman, George C.,§ Prof. of Surgery in the Ohio Medical College. This operation was performed, it is inferred, in February, 1856. The report is in Prof. B.'s own terms.

"This woman had been tapped several times, and for the last time, five days before the operation; during which time the tumor had regained its usual dimensions. On its removal, it weighed about twenty-two pounds. The adhesions were few, and easily broken up. The pedicle was left in the cavity of the peritoneum, attached to the ligatures without." Prof. B. never saw a wound, even of the extremities, heal more kindly: no bad symptoms followed, not even

* Letters from Prof. Delamater.

† It is possible that Prof. A. had additional cases, but if he had, I have not been able to get the clue to them.—H.

‡ Letter from the operator.

§ *Cincinnati Lancet*, March, 1856.

nausea, from which she always suffered after tapping. More than three years after the operation, the patient was in fine health."*

Case 5.—Blackman.* Prof. B.'s second case was at Lynchburg, O., some six months subsequently to the above. The tumor was solid, and weighed about twenty pounds. The adhesions were slight, but the patient being greatly emaciated, sank, exhausted, some forty-eight hours after the operation.

Case 6.—Blackman.* In this case, Prof. B. made a short exploratory incision, in a case of abdominal tumor, supposed to be ovarian; but finding very strong adhesions, at once abandoned the operation. The patient died a few days subsequently, but not, as he supposes, from the operation. The autopsy revealed the presence of a tumor, composed of both uterus and ovaries, in which a portion of the small intestines was completely imbedded; so that any attempt to withdraw it from the abdomen, would inevitably have ruptured them.

Case 7.—Blackman.* This case occurred only a few weeks since. The patient had been tapped some eight or ten times. Extensive adhesions were encountered. The tumor was unilocular, and weighed about twenty pounds. Notwithstanding the most liberal use of opium, peritonitis supervened, and the patient died, at the end of sixty-one hours.

Case 8.—Bowles, J. D.,† of Harrison, Hamilton county. The patient was Mrs. Brant, æt. 25. The operation was performed Aug. 5th, 1844. A year previously, a small tumor appeared in the left illiac region, which grew steadily. At the time of the operation, it occupied the whole of the lower part of the abdomen, extending upwards to a point midway to the umbilicus and ensiform cartilage. Its surface was hard and uneven. It could be moved freely, in a lateral direction, and somewhat in a vertical direction. The vagina and os uteri were healthy; the former inclining to the left. The tumor could be felt through it. She complained of pains in the loins and thighs, at times resembling parturition. In most respects the various functions of the body were performed in a healthy manner. She was the mother of four children.

The preparation of the patient, position, etc., were as usual. The incision was in the linea alba, and nine inches in length. The omentum was in front of the tumor, which was adherent to it, as well as to the uterus and bladder. The pedicle was "about two inches

* Letters from Prof. B. † *Western Lancet*, 1844.

wide;" its blood vessels being large and distended. It was transfixed by a double ligature, and tied in two parts. Not a jet of arterial blood was seen.

On the thirteenth day Mrs. B.'s health was better than before the operation.

The attachment was to the right broad ligament, instead of the left, as was expected from the history of the case.

The tumor was solid, and weighed five pounds. It was evidently fibrous.

Case 9.—Buckner, P. J.,* deceased, of Georgetown, O. This operation was performed April 14, 1848. The patient was Mrs. Lawrence, aged 32, of Winchester, Adams county; the mother of six children. The tumor commenced six years previously, low down in the left illiac region. When first observed, it was about the size of a goose's egg, and slightly movable. In a few months it seemed to occupy the right side. About a year and a half after it first presented itself, she was delivered of her fifth child. She lost sight of the tumor at the sixth month, which at delivery seemed to have returned to its original size. Two and a half years subsequently, she was delivered of her sixth and last child, which left the abdomen as prominent as at the sixth month. In the absence of pregnancy and lactation, she menstruated regularly.

The abdomen, at the time of the operation, was as prominent as at the full period of utero-gestation; having a sulcus running from the epigastric to the illiac region. The left side was prominent, soft and elastic, fluctuating distinctly. The right side was hard and firm, but elastic. The os uteri was healthy, and within an inch and a half of the os externum. The bowels were evacuated, and the diet reduced, for some days, preparatory to the operation.

The incision was in the linea alba, and extended from the umbilicus to the pubic symphysis. Eighteen pints of imperfect pus were discharged. The parietes of the sac were firmly united to the abdomen from one semilunar line to the other, and from a point three inches above the umbilicus, to within an inch of the pubes. It was impossible to distinguish the line of adhesions, so that, after emptying the sac, a fold of its posterior wall was pinched up, and found not to be adherent to the parts beyond. This was drawn out, and divided with a knife, so that the hand passing through it, might thus

* *Ohio Med. and Surg. Journal* for Jan., 1849. Also *Western Lancet for* 1848. Also Proceedings of O. S. Med. Society for 1851.

reach the lateral adhesions. The left side being thus freed from attachments, the walls of the abdomen collapsed, leaving the right side as prominent as ever.

Here was another mass, containing a similar fluid, filling the entire right side, and dipping down into the pelvis. This consisted of two cysts, the larger of which was punctured, discharging six pints of fluid similar to that already evacuated. The superior surface of the cyst was adherent to the omentum and walls of the abdomen, from the umbilical, to the right hypochondriac region. This was the most firm and difficult point to overcome in the operation. In effecting it the omentum was lacerated, and bled so as to require a ligature. To facilitate this stage of the operation, the incision was extended, so as to make the entire wound eleven inches. The pedicle arose from the broad ligament, embracing the fallopian tube and ovary, and was two inches in diameter. It was transfixed, and tied in two lateral halves. The wound was dressed as usual, with only five interrupted sutures, however. The operation occupied an hour and a quarter. The cyst weighed twenty-eight and a half pounds; the solid portion amounting to four and a half pounds.

On the thirty-fourth day, the last ligature came away. On the first of June, the patient was walking about, her health and strength improving daily.

After the lapse of more than two years, this lady was in good health, and menstruated regularly.*

Case 10.—Buckner.† This operation was performed June 31, 1850. The patient was Mrs. Carter, of Cincinnati, aged 39 years, the mother of several children. A round tumor was felt through the walls of the abdomen, elastic and movable, with but little sensibility.

The abdomen was divided in the linea alba, to the extent of eight inches. The tumor presented numerous adhesions, which were divided with the knife. The pedicle was about an inch in diameter, and arose from the right ovary and broad ligament. It was secured by a single ligature. About the time of closing the wound, from efforts to vomit, the bowels protruded, and were returned with difficulty. The dressings were as usual, The wound healed kindly, although the general symptoms, at times, were alarming. Thirty-

* Proceedings of Ohio State Med. Society for 1850.

† Proceedings Ohio State Society for 1850; also, *Ohio Med. and Sury. Journrl* for 1849, and for Jan., 1850.

nine days after the operation, the ligature was removed, and the patient was able to walk about the room. Mrs. Carter is still living in Cincinnati, in the enjoyment of perfect health.*

Case 11.—Buckner.† This patient was Mrs. W., of Augusta, Kentucky. The operation was performed June 15, 1848.

Two distinct, solid tumors could be felt through the walls of the abdomen; one freely movable in the umbilical region; the other firmly fixed in the hypogastric and illiac regions. The vagina was much shortened; the cervix greatly elongated; the os resting behind the symphysis pubis. The tumor was distinctly felt through the walls of the rectum, being solid and irregular: it was firmly packed down into the pelvis, from which it could not be moved.

On making a long incision in the linea alba, the superior tumor and bowels immediately protruded. Its pedicle was of the size of the thumb, and attached to the lower one. It was ligated, and the tumor removed. The lower tumor was lifted out of the pelvis with difficulty, though no adhesions existed. Its pedicle was very large, arising from the left broad ligament. The left ovary being apparently in a diseased state, it was deemed best to remove it. The pedicle was ligated in four equal parts. Dressings as usual. The patient died of peritonitis on the sixth day. The tumors were fibrous.

Case 12.—Buckner ‡ The patient, Mrs. Tegarden, of Fairfield county, was the mother of nine children. The tumor was of two years' growth, commencing after the eighth confinement. During the latter part of her ninth pregnancy, Mrs. T. suffered very much from colic. The operation was performed October 4, 1851. The incision, nine inches in length, was in the linea alba. On exposing the tumor, it was found not to be omental, but mesenteric; being bound to the posterior aspect of the abdomen by little more than a reflection of peritoneum. On the anterior aspect of the mass, the small intestine was intimately adherent for twelve inches. This being separated, it was found necessary to ligate several vessels. On the ninth day, the wound having already united, was again opened in the lower part, and about two pints of fetid, decomposed blood were removed. The patient recovered within seven weeks. We learn from Dr. Geo. E. Eels, who knows her well, that this lady is still living.§

* Recent letter from Dr. Taliafero.

† Proceedings of Ohio State Medical Society for 1851.

‡ *American Journal Medical Sciences*, 1852.

§ Dr. Taliafero has the impression that Dr. P. J. Buckner performed an operation in Butler county. I can get no clue to it owing to the death of the operator. H.

Case 13.—Buckner, William,* deceased. This gentleman operated a single time. The patient was a young lady aged about twenty. The tumor was fibrous. The patient died of hemorrhage on the third day.

Case 14.—Chamberlain, E. K. A considerable degree of perseverance in making inquiry, has not resulted in even the slightest success, in obtaining particulars, in reference to this case. It was never published. It is given in Atlee's tables, on the authority of a letter from Dr. Chamberlain himself. It is believed that Dr. C. resided in Cincinnati, though even this, is not quite certain. Buckner's report, Atlee's tables, and Lyman's monograph, all attribute the case to Ohio. The patient died on the table.

Case 15.—Crume, P. M.,† Prof. of Obstetrics in the Cincinnati College of Medicine. This operation was performed in 1848. The patient, Mrs. Evans, of Preble county, was married at about the age of nineteen years. In the course of a year, she supposed that she was about being confined, but after severe suffering, continuing two weeks, what had appeared to be parturient efforts subsided, to be renewed again at the end of about a year. These annual attacks continued for nine years, greatly impairing her general health. A short time prior to the tenth annual recurrence, the patient being thirty years old, Prof. Crume was induced to undertake the extirpation of that which was supposed to be an ovarian tumor. It proved to be an "irregular tumor, weighing nine and one-half pounds, evidently the result of a tubular conception. The patient died on the third day, probably in consequence of the low temperature of the room during the operation, inflammation having set in at an early period after the first dressing."

Case 16.—Dorsey, G. V.,‡ of Piqua, Miami county.

The patient was Miss C., of Miami county, aged thirty years. The operation was performed April 7, 1858: patient had suffered from dyspepsia and deranged menstruation for more than two years. Four months previously, the doctor recognized a considerable enlargement of the left ovarium. A careful use of iodine was resorted to. This, in various preparations, was kept up for several months, without any obvious benefit. The tumor continued to grow, and finally became so large as to fill the whole left side of the abdomen, forcing out the parietes in every direction, and impeding respiration,

* Letter from Dr. Taliafero. † Recent letter from Prof. Crume.
‡ Letter from Dr. Dorsey.

by preventing the descent of the diaphragm. Under these circumstances he proceeded to its removal, the patient being anesthetized, and in the ordinary position,

An incision about eight inches in length was made in the linea alba, and this met by a transverse incision, extending on the left side, to the distance of six inches. The abdomen, being fully open, revealed, at once, the extent, annd numerous adhesions of the tumor. It occupied the whole of the left side of the abdomen, forcing the intestines in the opposite direction, to which, with the spleen, omentum, and abdominal parietes, it was strongly adherent. It was penetrated in every direction with large blood vessels. Those of the neighboring parts, especially of the mesentery, were exceedingly large, many of those of the latter part being of the size of the little finger. The greater part of the adhesions were separated with the hand; in one or two places, however, arteries were divided with the knife, and carefully secured. I conclude the report in Dr. Dorsey's own language:

"Having, after nearly an hour's work, arrived at the root of the tumor, nothing like a pedicle was found, but only a broad adhesion of a diseased mass, occupying the place of the left ovarium, to the adjoining parts. It was found that the only possible means of removing the immense tumor was to introduce a strong, double ligature into a portion as close as possible to the healthy parts, and tie in each direction, so as to encircle the whole attachment. This being done, the wound was carefully cleansed, and closed with stitches and adhesive straps. A large amount of fluid escaped from the tumor during its removal, and the solid portion, which remained, weighed nearly seven pounds. It was remarked, that although so great an amount of substance had been removed, still the abdomen remained greatly enlarged; this seemed to arise from the distended state of the intestines, and the enlarged and thickened state of the mesentery.

"The patient recovered from the effects of the chloroform, and for two hours seemed pretty comfortable, complaining only of intense burning in the abdomen. Shortly after this, however, she became restless; insisted on being turned; had fainting attacks, catching of the breath, irregular respiration; and finally died about four and a half hours after the termination of the operation."

Case 17.—Dunlap, A., of Springfield, formerly of Ripley. This case was refused publication by a western medical journal; it was accordingly never published, but referred to incidentally, in the American Journal of the Medical Sciences, for Oct., 1854. The

patient was Mrs. R., of Ross county. The tumor was multilocular, and weighed forty-five pounds. "The patient died on the seventeenth day after the operation of diabetes." The wound healed mainly by the first intention. No post mortem was made.

Case 18.—Dunlap.* The patient was Mrs. Hopkins, of Brown county, aged thirty-five years. Had given birth to six children, the last three years previously. Operation performed June 10, 1850. Menses ceased four months previously: abdomen as large as at six or seven months' pregnancy: had pain in the back, soreness through the lower part of the abdomen, and uterine hemorrhage. Incision in linea alba, eleven inches in length. One gallon of thick opaque fluid was drawn off. Adhesions were extensive, but not firm, and were readily separated by the fingers. Size of pedicle not noted. It was ligated in two equal halves, by a double ligature. Wound closed by five interrupted sutures, with strips of adhesive plaster intervening. Great prostration followed, from which there was complete re-action within two days. On the sixteenth day, there was free discharge from the vagina, which dispersed a considerable tumor in the hypogastric region. About the same time, there was free discharge from the wound in the abdomen. The ligatures came away on the thirty-first and thirty-fourth days. In six weeks the patient was able to be on her feet. Mrs. H. has since given birth to two children.†

Case 19.—Dunlap.‡ The patient, Mrs. B., of Bracken Co., Ky., aged thirty-seven years, the mother of five children, was tapped for ascites four times. After the second tapping, a tumor was discovered in the abdomen. The operation was performed March 24, 1853. At that time she was reduced in flesh, the abdomen enormously distended, with fluctuation in every part except the right illiac region. She was mostly confined to bed. The incision was near twelve inches in length. The adhesions were slight, and were readily broken up by the hand, except where tapping had been performed, where the knife was called into requisition. The pedicle was transfixed with a needle, armed with a double ligature, and each half ligated. Ordinary dressing.

On the thirteenth day the patient, with assistance, walked across the room. The ligatures came away on the twentieth day, at which time she was able to walk into the adjoining room without assistance. The tumor weighed thirty-seven pounds.

* *Western Lancet* for June, 1851. † Letter from Dr. Dunlap.
‡ *American Journal Medical Sciences* for Oct. 1854.

Case 20.—Dunlap.* The patient was Mrs. F., of Clermont county, aged 46 years. Had ceased to menstruate six years previously. Operation performed May 17, 1853. About three years previously, Mrs. F. discovered a tumor, about the size of her fist, floating in the lower part of the abdomen. This gradually enlarged, till it filled the cavity of the abdomen. Fluctuation was distinct in every part. She was greatly reduced in flesh, but her general health was good.

The incision was ten inches in length. The left ovary was removed. Dressing as usual. Bowels were moved on the third day, by medicine. A sanguineous discharge, resembling the menstrual, made its apperance on the third day. She was able to be up on the fourteenth day. Ligatures came away on the twenty-seventh day. The tumor, we infer, was multilocular, and weighed thirty-one pounds. The patient has since enjoyed uninterrupted health, and is more fleshy than ever before.

Case 21.—Dunlap.† This operation was performed in 1855, on Miss W., of Davenport, Iowa. The tumor was fibrous, and weighed thirty pounds. The patient died of hemorrhage.

Case 22.—Dunlap.† This operation was also performed in 1855. The patient was Mrs. Ramsey, of Winchester, Adams county. The tumor was a multilocular cyst, of sixty pounds weight. The patient recovered.

Case 23†—Dunlap. The patient was Miss M., of Harrison Co., Ky. The operation was performed in 1856. The tumor was multilocular, and weighed twenty-four pounds The patient recovered.

Case 24.—Dunlap.† This operation was also performed in 1856. The patient was Mrs. L., of Scioto county. Nine months previously, Dr. Kimball, of Lowell, Mass., made an opening, six inches in length, into the abdominal parietes, decided the operation to be impracticable, and abandoned it. Dr. D. removed a multilocular tumor of thirty-two pounds in weight, and the patient recovered.

Case 25.—Dunlap.† This case also occurred in 1856. The patient was Mrs. W., of Adams county. The tumor was a multilocular one, of thirty-three pounds. Recovered.

Case 26.—Dunlap.† This again occurred in 1856. The patient was Miss B., of Fayette county. The tumor was fibrous, and weighed one hundred and six pounds. The patient died ten days after the operation "from inanition."

* *Amer. Jour. Med. Sciences* for Oct., 1854. † Letter from Dr. Dunlap.

Case 27.—DUNLAP.* Patient was Mrs. R., of Chillicothe. The tumor was a simple cyst, weighing 136 pounds. Patient "died on the seventh day, from congestion of the brain."

Case 28.—DUNLAP.* This also occurred in 1856. Patient was Mrs. B., of Fort Wayne, Ia. The tumor was a multilocular one, of thirty-two pounds weight. Died in thirty-six hours, from "peritoneal inflammation."

One of the above cases, stated to have recovered, died "of disease of the lungs," but not until it "could be said to be free from the danger of the operation. Six of these cases are still living, and enjoying good health."*

Case 29.—FARRELL, JOHN,† of Warren, Trumbull county. The patient was Mrs. S., of Coitsville. The tumor originated in the left ovary, and occupied the whole of the abdominal cavity. The patient was tapped five times, at intervals of four or five weeks, losing about two gallons on each occasion. An incision was made in the linea alba, eight and a half inches in length. The tumor was found to be extensively adherent to the uterus, intestines, and abdominal parietes; so much so, that it was deemed expedient to abandon the operation. The wound was dressed with sutures and adhesive straps, and united by the first intention, except where a broad tent was introduced into an opening made into the sac. This was left for several months, and by it a discharge was maintained, to the time of her death. This occurred, in connection with an attack of acute pneumonia, about twenty-two months after the first tapping, and about a year, it is inferred, after the attempt at extirpation.

Case 30—FARRELL.† Dr. F.'s second case was that of Mrs. McCally, of Warren, Trumbull county, aged 28; the mother of five children. The operation was performed in August, 1850. The tumor was first observed four years previously. The incision was ten inches in length. The cyst was a compound one, involving the right ovary. The ligature came away on the thirty-second day. The patient recovered excellent health, after severe peritonitis, and a slow closure of the wound by granulation.

Mrs. M. menstruated regularly after the operation; but up to November, 1854, when she left Warren, she had not borne offspring.‡

* Letter from Dr. Dunlap. Dr. D. was connected with Dr. Bradford, of Kentucky, in another successful case. It does not fall within the scope of the Report, because it was not in Ohio, and Dr. B. was the principal operator. He was "in partnership" with Dr. B., in four of the cases given.

† Proceedings of Ohio State Medical Society for 1851.

‡ Recent letter from Dr Julius Harman, who, with Dr. J. B. Harman, conducted the after treatment.

Case 31.—Fries, George,* of Cincinnati. The patient, Mrs. C., was 51 years of age; the mother of several children; menstruated regularly, and had always enjoyed tolerably good health.

Soon after her last confinement, eight years previously, she observed, in the right illiac region, a small tumor, which grew at a moderate rate till a year previously, when its growth became rapid, and it soon filled the cavity of the abdomen. She suffered but little, aside from mere distension. There had, at no time, been the ordinary signs of inflammatory action about the tumor. It was smooth, regularly protuberant, changing but little with the altered position of the patient. Abdomen fluctuated distinctly on percussion. In the dorsal decubitus there was dullness at the umbilicus, with resonance in the lumbar regions. The cyst being readily shifted from side to side, was believed to be free from adhesions.

Operation Oct. 30, 1856. There is no account of preliminaries. Incision three inches in length, low down, and in the linea alba. The tumor being exposed, was emptied of about thirty pounds of colorless fluid, when the sac was withdrawn, its pedicle ligated, and the wound dressed in the usual manner, except that a large darning needle was passed through the pedicle transversely, just interior to the ligature, and exterior to the wound. This was done for the purpose of producing adhesion between the pedicle and the edges of the incision, and preventing the escape of sloughs, etc., into the peritoneal cavity.

The after treatment consisted mainly in an appropriate regulation of the diet, and the administration of opium, of which the patient took 24 grs. on the first, 15 on the second, and 10 on the third day. On the fourth day, having had no evacuation of bowels, she was ordered Croton oil and turpentine in sufficient quantity to produce the desired effect.

The ligature came away on the fourteenth day. This lady resides in Cincinnati, and is in excellent health.†

Case 32.—Fries.‡ The name, age, etc., of patient are not given. We infer that the operation was performed about the 1st of May, 1856. Six weeks previously patient had given birth to a two and a half months' fœtus. The preparatory treatment consisted in the use of aperients and light diet. The incision was about ten inches in length. The peritoneum was found closely adherent to the walls of

* *Western Lancet* for December, 1856.
† Recent letter from Dr. Fries.
‡ *Western Lancet* for March, 1856.

the sac, and without being aware of it, both cavities were opened at once, allowing a large quantity of fluid to escape. The adhesions were found to be such, that it was thought best to evacuate the fluid and allow the sac to remain, and depend upon injections to prevent reäccumulation. The wound was accordingly closed. Six days afterward the tumor was found to be filling rapidly, and on the tenth, was nearly as large as before the operation. The next day the imperfect cicatrix opened, and a very fetid fluid escaped. Injections of nitrate of silver were now used for three or four days. This failing, various other fluids were injected without avail. Finally the attempt at extirpation was renewed, and crowned with success. The adhesions, extending over only about one-half of the surface, were easily detached. The pedicle was allowed to remain in the cavity of the peritoneum. The ligatures embracing it passed out through the lowest point of the incision. The diarrhœa continued, however, and the patient died on the seventh day after the removal of the tumor. The reporter expresses the opinion that he erred in not completing the operation at first.

Cases 33, 34, 35, 36.—HAMILTON, J. W.,* Professor of Surgery in Starling Medical College; author of this report.

Case 37.—HOLSTEIN, J. G. F.,† then of Zanesville, now of the National Medical College. Patient was Miss Smitley, of Muskingum county, aged twenty-seven; tumor was of three years standing. Nothing but increased size of the abdomen, and weariness from carrying her burden, caused her to notice any deviation from health; the abdomen was tense, imparting fluctuation, like common dropsy. The fluid was evidently in a cyst within the abdomen, and could be lifted about in mass. The canal and cervix uteri were healthy. Simpson's sound passed to the depth of two and a half inches. Uterus was more movable to the right than to the left. Menstruation regular.

The usual preparation of the bowels, elevation of temperature of room, and position, were observed, and the operation performed in the ordinary manner, with an incision seven and a half inches in

* Cases 33 and 34 were reported in detail, in this Journal, for January, 1859. Cases 35 and 36 were reported in like manner in the last number. 34 died at the end of forty-two hours, from gangrenous inflammation of the tumor, the removal of which was not accomplished. 33, 35 and 36 are living, and in good health. Those who have not the means of referring to these cases may learn the leading facts, in regard to them, by a careful study of the Analysis and Summary.

† *Cincinnati Lancet* for December, 1855.

length, October 12, 1855. There were no adhesions. Cyst was drawn from the cavity of the abdomen by traction, upon a ligature which had previously been made to transfix its walls, assistants meanwhile exerting pressure upon the sides with sponges wrung out of warm water. The left ovary was implicated, the pedicle consisting of the broad ligament and fallopian tube, whose fimbriated extremity, as large as the hand, was spread over the tumor, apparently holding it in its grasp. A needle, armed with a double ligature, was passed twice through the pedicle, and tied firmly on each side. Not four ounces of blood were lost, and none of the viscera were exposed except the uterus. Dressing as usual.

We infer that the cyst was a simple one. The whole tumor weighed twenty-six pounds, of which the cyst was two and three-fourths pounds.

The cure progressed without serious symptoms. Bowels acted on the sixth day, in response to a dose of six com. cathartic pills. Patient commenced sitting up on the eighth day; ligature came away on the seventeenth. The only anodynes noted were teaspoonful doses of Cam. Tinc. of Opium. Patient left for her home, a distance of fifteen miles, Oct. 31, "in exuberant health and spirits." Dr. Dillon, of Putnam, states, in a letter just received, that Miss S. is in perfect health.

Case 38.—Howard, R. L.,* formerly Professor of Surgery in Starling Medical College. The patient was Miss Jones, aged seventeen, of Franklin county. Her health was very greatly impaired, and death was apparently near at hand. The tumor was a large oval mass, filling the cavity of the abdomen, and distending its walls. Obscure fluctuation revealed the presence of more or less fluid in the center of the tumor. The uterus, on examination per vaginam, seemed to be healthy. After two tappings, followed by rapid refilling, the tumor was extirpated. The incision was from a point three inches above the umbilicus, down the linea alba, to the pubes. The tumor was attached to the uterus somewhat, but was otherwise free. The peritoneum surrounding the pedicle was divided on a grooved director in the situation of the ligature, and the pedicle divided an inch from it. The patient recovered without an unpleasant symptom.

It is now more than seven years since this operation was performed. This woman has been married for several years, and is in perfect health, though in common with other married sisters, is childless.

* *Ohio Medical and Surgical Journal*, vol. 5.

Case 39.—Howard.* Prof. H.'s second case was that of Mrs. Matthews, of Franklin county. She was aged twenty-eight, and was the mother of four children. Previous to her last pregnancy, the tumor was large enough to fill and distend the cavity of the abdomen. During her term, however, she continued to enjoy good health, suffering only from distension. From the time of her last confinement, which was two years previously to the operation, the tumor grew rapidly. When first examined by Prof. H., in 1852, she was firmly convinced that she was six months pregnant, resting her opinion upon the fact that her catamenia had been absent for that length of time, and that she was sensible of the child's motion. On the first day of September, 1853, she was tapped, when nine gallons of fluid were discharged, which left a large solid growth in the abdominal cavity.

On the fourteenth of October, eight gallons of fluid were removed by tapping, and the operation proceeded with at once. The incision extended from near the umbilicus to the pubes. The tumor was found firmly adherent to the parietal peritoneum. The adhesions were broken up from four to six lines beyond the boundaries of the incision. Their character was such as to lead him to abandon the idea of an extirpation. He accordingly removed a portion of the cyst, and introduced a tent, made of lint, into its cavity, for the purpose of preventing closure. A low form of fever attacked the cyst and peritoneum, resulting in the death of the patient on the seventeenth day.

Case 40.—Howard.† Prof. Howard's third and last case was near Bellville, Richland county. I have not succeeded in procuring the details. From Dr. Sachse, of this city, who assisted him, it is learned that the adhesions were such as to lead to his abandoning the operation after it was commenced. The patient died at from two to seven days subsequently.

Case 41.—Litzenberg,‡ of Hamilton county. Mrs. J. R, of Boone county, Ky., became his patient April 29, 1855. Tumor had been growing for two years; for the last six months, very rapidly; and, commencing in the right illiac region, it extended from that point upward, and to the left. It was now a large pelvo-abdominal tumor, greatly distending the abdominal parietes. The uterus could

* Letter from Dr. Beach—verbally from Dr. Sachse.

† *Ohio Medical and Surgical Journal*, vol. 5.

‡ *Western Lancet* for March, 1856.

be moved quite freely on the point of the finger. The outline of the tumor could be felt in the abdominal cavity, with a firm band dividing it into two nearly equal parts, giving the sensation of two distinct tumors. The whole presented distinct fluctuation.

Two tappings were made, securing the evacuation of fourteen and sixteen quarts, respectively, of albuminous fluid. These did not materially reduce the size of the abdomen, which, on the contrary, continued in a state of great tension. Emaciation was extreme, but her appetite continued good.

The operation was performed May 22d, after the usual preparation. The incision was in the linea alba, and eighteen inches in length. The mass was found adherent to the parietal peritoneum, omentum major, colon, small intestines, and illiac fossæ. These were separated by the hand. Pedicle, we infer, was attached to the right ovary, and was an inch in diameter. It was secured by a double ligature, and left long enough to reach the lower extremity of the external incision. From the point of its connection with the body of the tumor, it extended upward and to the left, constituting thus the firm band before spoken of as dividing the mass into two nearly equal parts. Dressing as usual. During the after-treatment, there was some suffering from flatus, which was relieved by the use of the rectum tube. Laxatives were administered on the seventh day, followed by free evacuations on the eleventh. The first ligature came away on the fourteenth, and the second on the nineteenth day. Patient left for her home in Kentucky, on the twenty-second day. Ten months after the operation, Dr. Litzenberg learned, through Dr. Sham, of Kentucky, that the patient was in better health than ever before.

The tumor was a multilocular cyst, which weighed more than forty pounds, after the tappings mentioned. The secondary cysts were seven in number, and contained about three gallons of fluid, one gallon of which appeared to be pus.

Case 42.—McArthur, T. W.,* of Wilmington, O. This operation was upon Miss S. M., on her sixteenth birthday. In April, 1857, she was of a size appropriate to the eighth month of pregnancy. At this time she had a violent attack of acute peritonitis, which seemed to be general. January 1, 1858, her sufferings had become very great, and her general health was failing.

The incision was six inches in length, and in the linea alba, com-

* *Western Lancet*, 1859.

mencing just above the umbilicus. Three sacs were tapped. The anterior and inferior portions of the tumor were readily separated by the hand. The lateral and superior surfaces were found so firmly adherent as to lead the operator to desist. The dressings were as usual. The patient was annoyed with vomiting for three days, but recovered from the effects of the operation, and three or four months afterward was in improved health.

Case 43.—McDowell, Ephraim,* of Danville, Ky. The leading facts of this case, as shown by notes taken by Dr. Drake, both before and after the operation, are as follows: the patient, Mrs. Delano, was of the age of 38; without offspring, though eight years married; had always menstruated regularly, and was never sick till five years previous to her death. About December, 1825, a hard tumor was discovered in the right illeo-hypogastric region, which steadily increased in size, till it occupied the whole abdominal cavity, from the pubic symphysis to a point above the umbilicus, reaching outwardly as far as the costal cartilages. It was hard, irregular, and slightly movable.

The description of the operation, with the subsequent memoranda of Dr. Drake, we give, as found in Prof. Gross' History of Kentucky Surgery.

"From the difficulty, or rather impracticability, of moving the tumor about, Dr. McDowell naturally concluded that it must be extensively adherent. Believing, however, that extirpation was not impossible, and the lady anxious to be relieved, an operation was determined upon. An incision was accordingly made in the usual manner in the linea alba, and the tumor exposed by separating the tumor and omentum, by which it was enveloped. The patient, at this stage of the operation, became so rapidly and excessively debilitated, that apprehensions were entertained for her immediate safety. The tumor, as had been previously conjectured, was found to be extensively and strongly adherent, and its extraction was pronounced impracticable. In about two weeks the wound was healed, without any material change in the general health.

"Dr. Drake visited Mrs. Delano on the 11th of March, 1827, about four months after the operation, and found her excessively emaciated, with swelling of the right leg, and all the symptoms of gradual exhaustion. The cicatrice, from the operation, existed in the linea alba, and was about two inches long. The whole abdomen

* Gross' History of Kentucky Surgery.

was excessively protuberant, from the pubic symphysis to the ensiform cartilage. The liver very hard and greatly enlarged, bulged out high between the short ribs and the umbilicus, over into the left side. Here, in contact with the ovarian tumor, in a kind of groove between them, the colon passed across, below the navel. At the center of the colon was a small, flattish tumor, which felt very hard, and could be moved along the bowel down into the sigmoid flexure. The ovarian tumor filled the right illiac region, and extended, in front, nearly to the umbilicus, crossing the linea alba, and being, seemingly, more prominent on the left than on the right side. It was fixed during respiration, and appeared to be immovable. The liver, on the other hand, obeyed the motions of the diaphragm."

Her menses ceased about a month after the operation. Death occurred soon after Dr. Drake's visit. The body was not examined.

This is supposed to have been Dr. McDowell's tenth and last case, but the only one which he had in Ohio, of which I have been able to learn. The operation was performed about the first of January, 1827, about three years before Dr. McDowell's death, and seventeen years subsequent to his first operation.

Case 44.—Mussey, R. D.,* formerly Prof. of Surgery in the Ohio Medical College, but more recently Prof. of Surgery in the Miami Medical College, and now resident in Boston, Mass.

The patient was Mrs. Sly, aged 40; the mother of thirteen children. The incision was from the umbilicus to the pubes. On exposing the diseased mass, the transverse colon was found to cross in front of the tumor, and to be firmly adherent to it below the umbilicus. Such were the adhesions that the extirpation was abandoned. The cyst was tapped of four or five pints of turbid fluid, and a tent inserted. In a few days the discharge became purulent, and so continued for three weeks. The opening then closed, and at the end of a few weeks more, the patient had entirely recovered. At the end of a year, she gave birth to her fourteenth child, at which time there was no sign whatever of the return of the disease.

Case 45.—Mussey, R. D.† The patient, a resident of Georgetown, O., was aged about forty years, and was the mother of several children. At the time of the operation, she was as large as at the full term of utero-gestation. The abdomen was opened to the extent of three inches in the linea alba, and the sac emptied. Its edges

* *American Journal Medical Science*, 1827.

† Proceedings of Ohio State Medical Society, for 1851.

were then stitched to the margins of the external wound by interrupted sutures. This was kept open, and the secretions thus discharged by the use of a tent, for nearly a year. Under proper constitutional treatment, she recovered pretty good health. The tent, however, was finally dispensed with, the wound closed, the disease returned, and the patient died a little more than a year after the operation.

Case 46.—Mussey, R. D.† This operation was performed in 1850, the last one of the kind undertaken by Prof. Mussey.‡ The major incision was made, when the disease was found to be a tumor in the walls of the uterus. The extirpation was not completed. The patient died of exhaustion at the end of fourteen hours.

Case 47.—Mussey, W. H§ This gentleman reports a case. The patient was Mrs. S, aged 56, the mother of six children. A year previously to the operation, a tumor appeared in the left illiac region, which moved with the varying position of the patient. At the time of the operation (Feb. 8, 1858,) the woman presented the appearance of a woman at the full term of utero-gestation. The patient was a confirmed dyspeptic, with pulse of 100, a scanty flow of urine, and constant pain in the abdomen and back.

The extreme left portion of the abdomen was firm and dull on percussion; the region of the linea alba more elastic, while the right presented distinct fluctuation. The uterus was normal in size, while posterior and to the right, a tumor of the size of an egg was observable.

The incision was in the linea alba, and eighteen inches in length. The adhesions were slight. The tumor was freely incised, and thus reduced in size, so as to enable the operator to reach the pedicle, which proceeded from the left ovary. This consisted of a thin web, two inches in width. It was transfixed and ligated in two portions. A second cyst, of the capacity of two ounces, was found attached to the right ovary. A ligature was applied and the cyst removed. Two ligatures were applied to arteries in the walls of the abdomen.

The sac with the contents weighed twenty-one pounds. The cyst was compound, consisting largely of an innumerable number of minute ones, giving the characters of a solid mass. The contents varied from a perfectly limpid serum to very stiff gelatin.

The external wound was closed with interrupted sutures three-

† Atlee's Tables, given on the authority of a letter from Prof. M.

‡ Letter from Prof. Mussey.

§ *Cin. Lancet* for April, 1858.

fourths of an inch apart. A tent of lint was placed in the inferior extremity of the wound, and the ligatures brought out through the same opening. A web of cotton was placed over the abdomen and secured by a bandage. The patient being intolerant of the use of opium, the tincture of hyosciamus was given in thirty drop doses, every two hours. Vomiting and diarrhœa were troublesome for several days; the latter was finally restrained by the use of the nitrate of bismuth.

On the sixth day, there being suppuration and a bad odor from the wound, Peaslee's artificial serum was injected through a catheter. For a week this was repeated daily. During a second week it was used on every alternate day, after which water was substituted.

The ligatures came away on the 19th and 24th days. At the date of the report, one month after the operation, there was a fair prospect of recovery. This was thwarted, however, and Mrs. S. died on the forty-fifth day.*

Case 48.—Mussey, F. B.,† of Portsmouth, Ohio. This operation was performed Dec. 1, 1857, on Mrs. Sexton, aged 39 years. The patient was considered to be in excellent condition.

The incision through the abdominal walls was nine inches in length. No adhesions were encountered. "The pedicle was very short and broad, and so vascular as to require six or seven ligatures. A small tumor being discovered on the other ovary, it was also ligated and removed. The uterus was atrophied, being of less than half its normal size. Owing to the extreme shortness of the pedicle, the ligated stump was returned into the abdominal cavity, instead of being secured external to the wound, as was the intention of the operator." The patient died on the thirty-seventh day.

The disease originated in the left ovary. The tumor, with contents, weighed twenty-five pounds; the emptied cysts, four and a half pounds. It consisted, apparently, of three unilocular cysts, having a common pedicle.

Case 49.—Thompson, Robert.‡ This operation was performed on the 9th day of November, 1847. The patient was Mrs. Hugh P. Lytle, of Etna, Licking county. It was a compound cyst, weighing twenty-nine and one-half pounds. The patient died at the end of twelve days.

* *Cin. Lancet* for May, 1858. † Letter from the operator.

‡ *Ohio Statesman* of Nov. 10, 11, 12 and 22, 1847.

Case 50.—Weber, G. C. E.,† Prof. of Surgery in Cleveland Medical College. The patient was Mrs. ——, of Trumbull county, aged about 45 years. She had always enjoyed excellent health.

On opening the abdominal parietes, the tumor was found closely and firmly adherent to the surrounding parts, and, accordingly, the extirpation was at once abandoned. The cyst was tapped, and the wound dressed for adhesion. The patient had been tapped twice.

The patient recovered without serious symptoms.

Case 51.—Weber.† The patient was Mrs. ——, of Cleveland. Adhesions of a formidable character were encountered, upon perceiving which, the cyst was opened by a free incision. Some thirty pints of serum were discharged. The patient died in the course of two or three days, from gangrenous inflammation of the sac.

ANALYSIS—SUMMARY—PRACTICAL DEDUCTIONS.

Number of Operations.—Ovariotomy has been performed or attempted forty-two times, where patient and operator belonged to the State of Ohio; in eight cases, by Ohio surgeons, upon patients residing in other States; in one case upon a resident of Ohio, by a surgeon resident in an adjoining State, making a total of fifty-one cases embraced within the range of this report. Of these, twenty-five have hitherto been unrecorded, and several others only very imperfectly recorded.

Age of Patients.—This is given in twenty-five cases. The average is thirty-four years, and the extremes sixteen and fifty-six.

Relation of Cure to Age.—The average ages of the younger twelve is twenty-six and one-half years, of which eight were cured.

The average ages of the older twelve is forty-three and two-thirds years; of these five only were cured. *Or, in the younger patients, the operation has been more successful than in the older, in the relation of eight to five.*

Effects of Tapping.—In nine cases tapping was performed from one to ten times in each. In six of these extirpation resulted in the cure of the disease. *Tapping, accordingly, does not seem to have vitiated the prospect of success.*

Adhesions.—These are characterized in thirty-three cases. In twelve cases they are said to have been "slight" or absent. In nine of these, or three-fourths of the whole, the patient was cured.

In twenty-two cases they are called "strong," "firm," "exten-

† Letters from Prof. Delamater.

sive," etc. Of these only four, or less than one-fifth, are cured. *The prospect of cure is good in proportion to the indications of the absence of adhesion.*

Length of Incision.—Specified in twenty-nine cases. In two cases the minor incision of three inches was made. One of these was temporarily, and the other permanently successful. In thirty-seven cases, it was from six to twenty inches. *The peritoneum may be injured, and its cavity and the abdominal and pelvic viscera exposed, with a great degree of impunity.*

Separation of Ligatures.—The time is specified in reference to eighteen ligatures. The extremes are fourteen and twenty-nine days; the average twenty-four days.

Time at which Death Occurred from Operation.—Specified in twenty-three cases. In two cases it is one year; in one case four and a half months; in three cases, from twenty to forty-five days; in five cases, from seven to seventeen days; in two cases, five and six days; in six, on the third day; in three cases within two days, one dying on the table.

Cause of Death.—Specified in fourteen cases, viz: Acute Pneumonia, one; Gangrenous Inflammation of sac, two; Congestion of Brain, one; Inanition, one; Shock, one; Exhaustion, one; Hemorrhage, three; Peritonitis, four.

Extirpation Impracticable.—This was the fact in thirteen cases, or more than one-fourth of the whole, viz: in 3, 6, 29, 34, 39, 40, 42 43, 44, 45, 46, 50 and 51. In seven of these cases, the unsuccessful attempt was evidently the cause of death, which occurred in every case within forty-five days; in six within seventeen days; in five cases within seven days.

Two (29, 40) recovered temporarily, each living about a year. One (44) was permanently cured. Three others, viz: 42, 43 and 50, are supposed not to have been made better or worse.

Extirpation Practicable.—In thirty-seven cases, or nearly three-fourths of the whole, the extirpation was accomplished.

In sixteen of these cases, viz: 2, 5, 7, 11, 14, 15, 16, 17, 21, 26, 27, 28, 32, 47, 48 and 49, death was evidently caused by the operation.

Cures.—In twenty cases there was recovery, after extirpation, without relapse, so far as is known, and attended uniformly with restoration to a good state of health. To this number, as cured, forty-four is to be added, making, as cured, a total of twenty-one.

Further: adding 42, 43 and 50, which are supposed not to have been either better or worse for the attempt at extirpation, and we have 24 surviving, and 27 perishing by the operation.

Subsequent History of Successful Cases.—No relapses are known to have occurred. Sixteen patients, viz: 4, 9, 10, 12, 18, 19, 20, 22, 23, 24, 31, 33, 35, 36, 37 and 38, are known, from recent letters, to be still living and in good health; 8, 30, 41 and 44, are known to have been in good health after the operation, at periods varying from a few months to four years, but beyond that the result cannot now be given; 29 and 45 each survived about a year, but are reckoned as unsuccessful.

Size of Tumor.—This is specified in twenty-nine cases. The smallest two, weigh five and seven pounds. The largest two, one hundred and six, and one hundred and thirty-six. The largest two, followed by cure, weighed sixty pounds each. The average in twenty-nine cases, specified, is thirty-four and two-thirds pounds. The fourteen smaller ones average nineteen pounds each, and include most of the fibrous or solid. Of these, three only, or about one-fifth, are cured. The fifteen larger ones average forty-nine pounds, and consist mainly of the compound cystic. Of these, nine, or more than one-half, are cured. *Or the extirpation of the larger ovarian tumors has been more successful than that of the smaller, in the proportion of nearly three to one.*

Pathological Characters.— In forty-one cases, the pathological characters of the tumor are specified. Of these, thirty-two are cystic, seventeen compound, twelve simple, and two named as simply "cystic;" six are called solid, or fibrous; two omental; two uterine, and one tubal fetation.

Of the seventeen compound cystic, eleven recovered; of the twelve simple cystic, only four; of the six solid, or fibrous, only one recovered. Of the other solid tumors, one, mesenteric, was cured. Or, the compound cystic constitute more than two-fifths of the whole; the simple about two-sevenths; the solid, one-seventh. And while eleven-sixteenths of the extirpations of compound cysts resulted in the cure of the disease, only one-third of the simple cystic, and one-sixth of the solid, resulted successfully. Furthermore, the two omental, the two uterine, and one tubal fetation, specified above, are supposed to have been diagnosed as solid. Then, of eleven cases diagnosed as solid, only two are cured by extirpation, while in five elevenths the diagnosis is inaccurate, the disease being

other than ovarian. There ought, accordingly, so far as this experience goes, to be no hesitancy in *rejecting the extirpation of solid tumors supposed to be ovarian, as an accredited surgical procedure;* especially as it is matter of common observation that they are frequently *amenable to treatment*, are usually of *slow growth*, and not necessarily incompatible with a *comfortable*, or even *protracted* course of life.

Admissibility of Ovariotomy as an Accredited Operation.—The expectation of life, from the time of the discovery of the presence of ovarian disease, is assumed as five years.

The average duration of the disease at the time of operation, in sixteen cases given, is about three years, and this is assumed as the average of the fatal cases. This, deducted from five years, the average expectation of these patients, leaves two years as the average expectation at the time of the operation.

The aggregate of deaths caused by the operation, including one of Dr. Dunlap, designated recovered, also 29 and 45, which lived a year each, is twenty-six.

Each of these cases being entitled to two years of life, it follows that fifty-one cases of ovariotomy have sacrificed *fifty-two years* of human life. But, these were the latter years of these patients, and consequently years of great suffering.

The average ages of the patients which recovered, is thirty-four years. The expectation of life at the age of thirty-four years, according to the Carlisle tables, is thirty-one years. Each of these patients, however, without operation, is entitled to two years, reducing the expectation growing out of a cure, to twenty-nine years. Then, the operation having cured the disease in twenty-one cases, it follows that, by hazards, resulting in the loss of fifty-two years of life attended with great suffering, surgery has secured *six hundred and nine years* of good health, or nearly twelve to one.

In the above, five years is assumed as the average duration of life in all cases, whether the disease is cystic or solid. It may be claimed that the average expectation in case of solid tumors, is greater than this, making the average too small. To avoid even the appearance of sophistry, let these cases be left out of the account, and the argument may be thus stated:

Ovariotomy has been undertaken in Ohio, and by Ohio surgeons, in thirty-two cases, characterized as cystic tumor.

In eleven of these cases the average duration of the disease is three years, and this is assumed as the average duration of the dis-

ease in all the cystic cases. This, deducted from five years, the average duration of life in connection with cystic disease, leaves two years as the average expectation, at the time of the operation.

The operation is admitted as the cause of death in fourteen cases of cystic disease, viz: 2, 7, 17, 27, 28, 32, 39, 42, 44, 45, 47, 48, 49, and 29, which latter survived one year. The consequent loss of life, admitted to have resulted from thirty-two cases of ovariotomy for cystic disease, is twenty-seven years. This however is invalid life.

The operation in these thirty-one cases of cystic disease, resulted in the permanent cure of the patient in sixteen cases, viz: 1, 4, 9, 20, 22, 23, 24, 25, 30, 31, 33, 35, 36, 37, 38, and 41. The average ages of these patients, in nine cases, is thirty-two years, and this is assumed as the average of the whole. The expectation of human life, at the age of thirty-two, is thirty-three years.

Each of these patients, without operation, is entitled to two years, reducing the expectation, growing out of a cure, to thirty-one years.

Hence, the operation having cured the disease in sixteen cases, it follows that, by risks in thirty-one cases, resulting in the aggregate loss of *twenty-seven years of invalid life*, surgery has saved to society *four hundred and ninety-six years of good health*, or nearly *fifteen* to *one*.

Hence, as the conservator of the life and health of his patients, *the surgeon, ordinarily, has no right, till a less hazardous or more successful treatment is presented, to withhold the operation, when the diagnosis of cystic disease is clear; if, after a candid and full statement of its hazards, the patient is desirous to assume them.*

This practical deduction applies, with especial force, to the proliferous cyst; because of its *rapid growth; the success which has attended its extirpation, and its not admitting of either palliation or cure*, by other means.

Surgical Cases. By Dr. F. HURXTHAL, of Massillon, Ohio.

CASE I.—*Ligature of Middle Meningeal Artery.*—John Uran, engineer, Pitts. F. W. & C. R. R., came in collision with a freight train, receiving a severe fracture of the left parietal with a portion of the superior part of the temporal (squamous) bone, a large portion of which was depressed. Convulsions and coma immediately supervened, upon the receipt of the injury, and continued until the de

pressed bones, 6 in number, were removed. After cleansing the wound of the clots, it was found that the middle meningeal artery was ruptured, and the blood ejected to a perpendicular hight of nearly 3 feet. The patient having already lost considerable blood, I felt confident that he must soon pass from the stage of action, unless prompt and efficient means were taken. I, at once, took up a fold of the dura mater, inclosing the artery, and placed a ligature around it, not without many misgivings as to the result of the procedure. The wound was closed with adhesive straps, and water dressings applied. The case continued to do well, and after the lapse of 4 to 6 weeks all the ligatures were removed except the one on the middle meningeal, and until it was thrown off (which did not occur until the 27th of December, 69 days,) I had much solicitude for the result. The amount of bone removed was one inch wide, by full two inches long, extending from the coronal suture anteriorly, to the posterior border of the temporal muscle. Shortly after the accident it was observed that the patient could not open his jaw; indeed a perfect state of trismus obtained, so that it was a difficult matter to introduce sufficient food to sustain the patient. For the first 6 weeks nothing but fluid aliments could be taken; from that time to this, now nearly 9 months, he has gradually recovered. Small pieces of bone were extracted from the fistulous openings, at intervals, up to July. The immovable condition of the jaw has entirely disappeared: he has regained his ordinary weight and feels, in every particular, well.

Case II.—*Compound Fracture of the third and fourth metatarsal bones of the left foot, with subsequent death of all the tarsal and metatarsal bones except one, from Phlegmonous Erysipelas.*—This case occurred in October, 1857. Shortly after the accident traumatic erysipelas made its appearance at the seat of laceration of the soft parts, directly in the center of the sole of the foot. The inflammation spread rapidly, and the constitutional disturbance was so violent that for several days little hope was entertained of his recovery. In the treatment we resorted to the use of tinct. ferri mur., in liberal doses, alternated with quinine and wine—local application of saturated solution of sulp. ferri was energetically kept up, by wetting cloths in the solution and swathing the leg to the knee. Upon subsidence of the erysipelas, there was found a large gangrenous spot on the dorsum of the foot, one and a half inch in diameter. The connecting tissue of the cuticle was entirely destroyed as high up as the upper third

of the tibia, and the skin hung around the limb, much like a very loose stocking, and was filled with a dark reddish, fœtid pus, which was evacuated below the external malleolus. By compress and bandage, well applied, the parts above the ankle joint gradually assumed a healthy condition.

Not so, however, with the foot, unmistakeable evidences soon pronounced the destruction of the os calcis, large portions of which, from time to time, were removed. In the course of a few weeks we were satisfied that all the tarsal bones, except astragalus, were involved and must necessarily come away. These representations were presented to the father, and two methods of treatment proposed. 1. Operative procedure to remove all the diseased bones, and if the tibia was found involved to amputate at the place of election. 2. To use constitutional remedies and watch the progress of the case. The latter method was adopted. The general health of our little patient (aged 14) responded to tonics beautifully, and as soon as weather permitted he was taken out every day. Crutches were soon called into requisition, and after a year's use he gradually threw them aside. At the present time he walks and runs with much comfort to himself without crutch or cane, and appears to have as much interest in, and takes as active a part in, the school boys' games as any one of his age. There is considerable contraction of the gastro chnemius, which it is my intention soon to endeavor to reduce. The sinuses are not all entirely healed; the discharge is, however, very slight.

Case of Strangulated Hernia. By JAMES S. REEVES, M.D., McConnelsville, O.

In the month of July, 1858, I operated for Strangulated Hernia, in a case of much difficulty, and with so favorable a result that I must give you some account of it.

John Ray, farmer, aet. 63, was taken suddenly ill in the harvest field, on Tuesday, July 13th. He went home, submitted to some domestic treatment, and felt better. On Wednesday morning he resumed his work, but complained of soreness in the right groin. There was much gastric distress, and he vomited frequently. The illness increased, and he again gave up his work and returned to the house, and passed the balance of the day and the night wretchedly.

On Thursday (15th) he sent for me; I found him laboring under the usual symptoms of strangulated hernia. Upon examination, I found a femoral hernia of the right side, strangulated.

I learned from him that in the year 1848 he received an injury in the right groin, from being struck by the handle of a plow while at work (a common occurrence among farmers), and soon after discovered a lump as large as a cherry, on the inner aspect of the right thigh, which would disappear on pressure, and return again when the pressure was removed. The "lump" gradually increased in size, and was thought to be a "wen." When about the size of a walnut, and after exerting himself, it became sore, and he had pains in the bowels, and vomited. Dr. P. B. Johnson, who was at that time his family physician, was consulted, and prescribed a brisk cathartic; the bowels were evacuated, and the patient went about his work again. Two years later his "wen" (as he persisted in calling it) became sore, and he vomited much, and had pain resembling colic. Dr. Edward Dawes was applied to and prescribed a cathartic, which relieved him. In 1854 he had a similar attack, and applied to me for a brisk physic, which was sent, and had the desired effect; and he had no further trouble with it until July 13th, when he was attacked as described. He supposed it to be an attack of billious colic, and had taken several portions of pills, and some castor oil, with the effect to aggravate all the symptoms.

I put him in a warm bath, and administered nauseants, and applied the *Taxis*, but without the slightest good effect. The hernia was irreducible, and I proposed an operation. To that neither the patient or the family would consent, and I was forced to yield to their desire to have him relieved otherwise.

The bowel had been strangulated nearly three days; the symptoms were violent, vomiting of stercoraceous matter incessant, constant hiccough, pulse 120, feeble and irregular. At 2 o'clock P. M. administered Hyd. Sub. Mur., 15 grs.; three hours later gave Croton Tiglii 3 drops, in emulsion; at 7 o'clock P. M. gave 3 grs. solid Opium; at 10 P. M. 3 grs. Opium, and at 1 A. M. 4 grs. Opium, under the influence of which he rested and slept six hours. Upon awakening, enemata were used, the abdomen fomented, cold applied to the seat of hernia, and the Taxis applied, without anything being gained. Treatment was continued until Sunday morning (18th), when I assembled the family and urged them to consent to the op-

eration, as affording the only chance to save the patient—stating my fears that the relief might (from loss of valuable time) come too late.

The patient and friends consented, and I proceeded to operate without further loss of time. The patient was placed upon the table, and Dr. J. H. Brown, of this place, (whose presence I had requested, and who rendered me valuable assistance,) endeavored to administer chloroform, but the patient objected to it so strongly, and put it aside with so determined an effort that its use was abandoned. A series of incisions was made through the tissues external to the sac, all of which were adherent, completely agglutinated, and in a highly congested state. The sac was adherent to the mass of tissues in part and could not be separated. The incision was then carried down to the bowel, which was also adherent to the peritoneum. The adhesions were with difficulty broken, and the bowel separated from the surrounding tissue down to the ring. The ring was then nicked in thirteen different places, the incisions being made through the sac, and the bowel was liberated and returned.

The wound was partially drawn together, water dressing applied, and the patient put to bed. Doctor Brown went home, and I remained with the patient. Gave opium, 4 grs. Patient was easier, but the retching continued throughout the night at intervals—hiccough persistent. At 8 o'clock, A. M., (19th) gave opium, 4 grs. Vomiting at longer intervals; hiccough still troublesome. 1 o'olock P. M., gave opium, 4 grs. At 3 o'clock P. M., vomited stercoraceous matter, and complained of pain in the illeo-colic region, and suffered greatly for a few minutes, when the bowels gently moved with an abatement of all the urgent symptoms. At 6 o'clock P M., gave opium, 3 grs., and soon after the patient sunk into a refreshing sleep. There was a gradual improvement during the night; the bowels moved several times—pulse 100. The patient continued to improve until Wednesday, when the sac began to protrude, and there was a discharge of pus from the wound. Removed the dressings, and with a double tenaculum seized the sac, and with bistoury and scissors, removed it, leaving only a small portion of the sac adhering to the ring. The surface of the wound presented a healthy appearance. The wound was again partially closed, and the water dressing continued. The bowels moved several times each day, although restrained by opium. By Friday, the vomiting had entirely ceased—occasional hiccough. On Saturday

(25th) I again opened the wound, from which pus continued to be freely discharged, and by proper manipulation succeeded in bringing away the balance of the sac. The cavity was then carefully cleansed, and the lips of the wound made to approximate as nearly as the granulating surfaces would justify, and dressed with a slight compress over simple water dressing. The wound closed slowly, but kindly, and the patient rapidly regained his health.

I am well aware that reports of operations for strangulated hernia are prosy, and not of much interest, but this case presented a combination of obstacles to a favorable result, which I think are worthy of note.

The hernia was of ten years' standing, and the bowel was not returned to the abdomen during the four years preceding the operation. The patient was 63 years old. The strangulation commenced on Tuesday, and continued five days before the bowel was released. The consolidation of the tissues external to the sac, (the result of previous inflammation,) the partial adhesion of the sac to the tissue around it, and which could not be broken, and its firm adherence to the ring, (and I have reason to believe to some extent the internal surface of the sheath,) rendered the operation exceedingly difficult and set the usual rules at defiance. In ordinary cases the nicking of the ring at the point of stricture, generally suffices to release the bowel, but in this case, it was not until the ring had been repeatedly cut and adhesions broken with the finger nail that the bowel could be returned. The bowel was much discolored and looked unpromising, but felt firm, and when the length of time it was girt by a ring of almost cartilaginous hardness is considered, its escape from destruction is a matter of surprise. The return of the bowel without the sac, and the subsequent removal of the sac, and complete recovery of the patient without an untoward symptom, have combined to make the case one of interest here, and I trust this imperfect sketch may prove of sufficient interest to the readers of the Journal to repay them for a perusal.

Case of Voluntary Dislocation of the Os Humeri. By C. E. WACHENSHWANZ, M.D., Columbus, O.

I was called, on the 22d day of May, 1854, on board the Hamburgh bark John Herman, Capt. J. Dickman, to see a sailor who

had luxated his shoulder. Upon inquiry, I ascertained that it happened while he was engaged in lifting the side of a tool-chest, weighing about three hundred and fifty pounds. The luxation was downwards, and inwards. I closed my left hand, and placing it in the axilla of the side affected, took hold of the humerus above the elbow, and pressing it to his body, to my surprise the luxation was reduced.

Capt D. observed, that he was an indolent fellow, and could dislocate his arm whenever he pleased; which he had done several times on the voyage, particularly in port, to escape work. This observation attracted my attention, and I asked the man if he could put his shoulder out of place at will. He answered in the negative, but said that very light causes had that effect, especially when he bent his body far over to raise anything. I desired him to demonstrate to me what he meant. A keg of dry prunes, weighing about 100 pounds, was placed before him. He bent his body over it, and by elevating one end about ten inches from the floor, the shoulder was again dislocated. He could also, by pulling horizontally, remove the head of the bone from its socket. I reduced it again with the greatest ease, but required a small pad in the axilla and moderate extension to accomplish it. I could not succeed as in the first instance. No pain whatever was created either by the luxation or reduction of the bone, and none existed during the displacement.

This fellow certainly had the power to luxate his os humeri at discretion, without pain or uneasiness; and immediately after I reduced it, he went to work as if nothing had occurred.

By a close examination of the shoulder and breast, no defect of the muscles was to be found; on the contrary the muscles were well developed. The man had great physical strength. Age about 24 years; had been a sailor almost nine years.

Case of Cystitis treated by injecting the bladder. By ROBERT M. DENIG, M.D. Columbus, Ohio.

The subject of the following case was a married lady, aged 26; mother of three children, and had usually enjoyed good health. Was called to see her on the 20th of July, one year ago, and learned from herself and her attending physician, Dr. Little, that, previous to her confinement, which took place in the preceding April, she

had suffered considerably from a difficulty in retaining the urine—but as the period of her confinement was rapidly approaching, her symptoms were supposed to depend upon her gravid condition—and no very persistent efforts were used to remove them. She was confined on the 5th day of April, with a perfectly natural labor, and had an ordinarily good recovery; no unpleasant symptom occurring except the persistence of the above mentioned urinary difficulty—which, in place of being relieved, became rather aggravated, and the discharge at times tinged with blood. About the middle of June following, having occasion to perform more than her accustomed amount of domestic labor, part of which consisted in washing, she was attacked on the following day with severe hæmaturia, and greatly increased inability to retain the urine. For this, she had various appropriate remedies, such as act. pot., parera brava, mucilages, &c., continued with dry cupping to the loins, warm sit-baths, and complete rest. When I was called to see her, she was passing per urethra, large quantities of almost pure blood, there being as much blood as urine, the latter always coming at the close of the evacuation, followed invariably by the most excruciating pain.

The pain, although much mitigated previous to the next evacuation, was never entirely absent. At this time she was taking act. lead and opium. As no very marked benefit had seemed to follow its use, we concluded to put her upon the use of Gallic acid and opium. The Gallic acid acted with great promptness, the hemorrhage diminished rapidly, and after three days the blood corpuscles could only be detected under the microscope.

It now became a matter of no small moment to determine the source of the hemorrhage—whether from the kidneys or bladder. The urine was diminished in quantity, amounting to about a pint and a half in twenty-four hours; showed no traces of albumen either with heat, or nitric acid, or both; was always acid in its reaction; sp. gr., 1025, and under the microscope revealing nothing but a few blood corpuscles with epithelial scales. Little or no pain in the region of the kidneys, on careful pressure; but constant pain in the pubic region, aggravated by pressure; pain after micturition, excruciating, referred invariably to the urethra. Under supposition that calculus might be present, we carefully sounded her twice; the passage of the sound, and any motion of it in the bladder caused the pain to be greatly aggravated, but no indication of the presence of stone could be elicited.

The constant acid condition of the urine seemed to contra-indicate the presence of cystitis, to which all the other symptoms pointed. The absence of the ammoniacal condition of the urine, which is usually present in inflammation of the bladder, could be satisfactorily accounted for, by bearing in mind the shortness of the time it was retained, not being long enough to allow of decomposition. And this explanation was confirmed by the fact, that, when at one time it was retained some hours, under the free use of opiates by suppositories and by the mouth, it was strongly ammoniacal immediately on its evacuation; and it invariably became highly so, upon standing some time in the vessel.

The symptoms then were, constant pain in the pubic region; inability to retain the urine more than an hour, even in the recumbent position, and scarcely fifteen minutes when on the feet; excruciating pain invariably following it; tinged more or less with blood, and not coagulable. Looking upon it as a case of Cystitis, in which the mucous membrane was deeply implicated, and as our general remedies had failed to give much relief, we resolved to resort to injection of the viscus itself.

Accordingly, on the 22d of August, we threw into the bladder, after having previously emptied it of its contents, four ounces of a solution containing five grains Sul. Zinc to the ounce of water. After retaining it a few minutes, it was allowed to pass off. The injection was followed by severe pain, but was, upon the whole, somewhat beneficial. After an interval of ten days, we determined to repeat the injection, and to substitute the nit silver for the sul. zinc. Of this, four ounces of a solution of the same strength as the previous injection, were thrown into the bladder, and suffered to remain ten minutes. The pain experienced by the use of the nitrate was greatly less than that from the zinc. The tolerance of the urine was so much increased by the use of these injections, that two and sometimes three hours could be passed in comparative comfort without voiding it. On the 13th of September, the same amount of injection of the same strength was repeated. No unpleasant effects followed, but on the contrary, marked relief of all the symptoms; nor was it found necessary to carry them any further. The subsequent use of the fluid ext. of par. brav., and mild laxation, completed the course, restoring the patient from a painful and loathsome disease to health, comfort, and the enjoyment of her family.

We do not suppose there is any great novelty in the above case,

and would not trouble you with any account of it, were it not for the fact that we could get very little encouragement, either from brother practitioners or books, for resorting to the measures instituted. There seems to be a dread of injecting the bladder, which circumstances, as developed in our case, would not justify.

Biliary Calculus.—A Case. By H. Z. GILL, of Columbus.

Mrs. L., æt fifty-eight, large frame, bilio-nervous temperament, has generally enjoyed very good health; was attacked in December, 1857, with severe pain in the stomach and bowels, resembling colic, attended with vomiting. This continued, notwithstanding all the means made use of to relieve, with but slight intermission for nearly three days. The pain, at times, was most severe, but the pulse at the same time little affected. Purgatives were given, and though six Seidlitz powders were given during one night (three only having been ordered) no operation could be produced until an enema was used. After the second operation from the bowels there was much relief experienced. Two or three biliary calculi were passed, the largest nearly the size of a pea.

From this time, for some months, she slowly but gradually improved in health with occasionally a slight attack of ague, which would come on by being exposed to damp or cold air. During the fall and winter of 1858 and '59 the chills came on more frequently, and could only be prevented by anticipating them with quinine. In some of these attacks the cold stage was almost imperceptible, and very little inconvenience felt with the exception of an unpleasant feeling in the right side sometimes amounting to a pain, and increasing as the hot stage came on during which the pain was almost intolerable in the side, shooting about to the shoulders, and down the spine and lower extremities; at the same time the pulse would rise to a hundred and thirty, forty, or fifty as at one time, and continued at that rapidity for about four hours, it being almost impossible to retain any medicine on the stomach on account of such frequent and severe vomiting, to control it. After this was passed the sweating stage would supervene, and the patient would perspire till she was bathed in perspiration.

The day following such an attack, besides the debility, there would be pain and tenderness in the region of the liver; the tongue would be heavily coated, in the case when the pulse continued so long at such a rapid rate; it was very dark, and was many days in cleaning off. The urine also would be loaded with bile, at times quite thickened with it.

As might be supposed, the patient was very much constipated, so much so that enemata, two or three times a week during the last few months of her life, were required. There were many other additions to her sufferings that might be mentioned, one of which was inflammation of the cardiac orifice and lower portion of the esophagus continuing some days after an attack, and sometimes until removed by internal use of ice, and counter irritation. Swallowing from this cause was at times almost intolerable.

In the latter six months of her life, but very seldom was there any bile expelled even after the most prolonged and powerful vomiting. Previously there had been every time the vomiting came on.

Autopsy.—The body emaciated; integuments tinged with retained bile. The intestines normal, except the large ones which were impacted. The liver healthy in color. All of the ducts coming from the liver were enlarged, some to the size of the little finger or larger. The ductus communis was entirely obstructed with two large biliary calculi.* The gall bladder contained some pus and bile, but was very much contracted and thickened in its walls. The calculi had the appearance of having been originally one; but the two parts were nearly equal in size, and the facets being at right angles to the axis of the duct, were worn smooth by friction. The end of one of the portions of the calculus extended very near to the duodenum; the other in opposite direction, beyond the junction of the cystic and hepatic ducts. This is no doubt the reason why there was so little bile in the gall bladder, and also why it was not rather enlarged than diminished.

Thus the case continued, varying in some of its symptoms, till the close of life, which took place on the morning of July 9th.

The treatment for the last year consisted of such remedies or pali-

*The weight of the two parts of calculus, a month after their removal, was five grains less than two drachms.

ations as the case naturally suggested; quinine, as before mentioned, liberally to support the strength and to postpone an attack as long as possible, which sometimes amounted to three or four weeks; also anodynes to relieve the pain. Previous to the above mentioned time cholagogues of different kinds, and with some benefit for a time, had been used.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Gulstonian Lectures. On Fever and Inflammation. Delivered before the Royal College of Physicians, London, 1859. By WILLIAM ADDISON, M. D., F. R. S., F. R. C. P.

LECTURE II.

IX. *Fever.*—When a person is inoculated with the virus of smallpox, a poison is introduced into the body—nay, into the blood. That it distempers the blood, is concluded from the generality of the symptoms.

These are, rigors and shivers over the whole body; to which succeed a fever, hot skin, quick pulse, and general illness, accompanied with severe pain in the back and head, inclination to vomit, pain on light pressure at the pit of the stomach, stupor and drowsiness.

Counting from the first invasion of the fever, the pustules of smallpox arise on the fourth day, rarely sooner. At first very small, they grow greater every day, and rise more and more to a head filled with pus. About the eighth day, the spaces between the pustules look red, and the hands and face swell. On the eleventh day, the swellings are evidently going down, and the pustules have reached their full magnitude. At this time, the fever has greatly diminished or wholly vanished.

Matter taken from any of the pustules will reproduce the fever with certainty in a person who has never had it. The virus, therefore, has been multiplied a myriad fold—regenerated in the body of the patient. And the question proposed is: To what element of the tissues or of the blood is the reproduction of the virus to be attributed? The pustules do not make their appearance until some days after the fever; excluding them, therefore, from any share in *generating* the virus, the plasma and the corpuscles of the blood remain for examination.

Liebig, it is well known, ascribes the phenomena which succeed the introduction of the smallpox virus into the blood to a process exactly resembling fermentation. Yeast, he says, is putrefying

gluten, and its component particles are therefore in a state of intestine motion or transformation. And he lays down the proposition—that a substance in the act of decomposition, added to a mixed fluid in which its constituents are contained, can reproduce itself in that fluid exactly in the same manner as new yeast is produced when yeast is added to liquids containing sugar and gluten.

Thus the virus of smallpox, which virus is formed out of blood, causes such a change in blood as gives rise to the reproduction of the virus from the constituents of that fluid; and the transformation is not arrested until all the particles of the blood which are susceptible of the decomposition have undergone the metamorphosis.

Admirable as this teaching is, there is another view of the matter. Naturalists insist that yeast is a growing plant; and physiologists insist that changes in a medium in which living bodies grow, are to be referred to other laws than those of ordinary chemical affinity.

In the January number of the Quarterly Review, for the present year, the writer of the article "On Bread," says:—"The yeast-*plant* represents one condition of a species of fungus remarkable for its wide distribution and the magnitude of its effects. The forms in which it is familiar to most persons, are yeast, the vinegar-plant, and the common blue mould which occurs on sour paste. Yeast and the vinegar-plant are the forms in which it vegetates under various circumstances, when well supplied with food. Mildew or mould is its fruit. The yeast plant," he goes on to say, "is a wasteful feeder. Not only does it decompose so much of the liquid as it requires for its own nutrition, but it produces a similar decomposition in the liquid around it; and this *contact action* is at present a stumbling block to natural philosophers, many of whom are earnestly endeavoring to surmount it. The chemist refers it to the same unexplained force by which inorganic substances cause the combination or separation of substances, without themselves undergoing alteration; as when spongy platinum causes a mixture of oxygen and hydrogen gases to unite and form water.

Many thoughtful and learned men have protested against the prevalent tendency to explain all vital phenomena by physical and chemical laws only, without regard to the order of conceptions specially belonging to vital phenomena However this may be, the multiplication or increase of a contagious virus—such as that of smallpox in the blood of a living person, its discharge by the pustules of the skin, and the patient's recovery from it—may *a priori* be assumed to be something more than a simple physical fact.

But let us state the argument from which we shall conclude that—

X. *The Virus of Smallpox is generated by Abnormal Metamorphosis or Diseases of the Corpuscles of the Blood.*—It has been established by unquestioned microscopical observations, that the qualities and secretions of an organ are aggregates of the qualities and secretions of the minute cells which compose it. In vegetable structures, the qualities of the leaf are produced by, and reside in, the cells of the parenchyma of the leaf. The colors of petals and the qualities of fruits are aggregates of the qualities or properties of the cells composing these parts.

In animal bodies, the qualities and secretions of the liver, skin, and kidneys, are known to be produced in the cells or particles composing the parenchyma of these organs. In all cases that are known of the generation of poisons in a living body, the poison is a product of cell-metamorphosis. It is so in vegetable bodies—instanced by opium, strychnia, belladonna, etc.; the properties of the juice of the poppy and of other plants being generated in the cells of the plant. So also in animal bodies; the poisons of wasps, bees, and serpents, are generated by the metamorphosis of cellular bodies.

Analogously of blood, we have shown that some of its most prominent and important qualities are qualities of its corpuscles, of the cellular bodies floating in it. And we have discussed the physiological production of matter in the blood corpuscles of the human body which is poisonous to the brain, namely, the matter of venous blood. When, therefore, as in smallpox, blood becomes the seat of a contagious poison which has been generated in it, there is a strong inducement to interpret the pathological fact by reference to physiological laws and phenomena. And this consideration has much more weight than might at first appear; if we find contagious fevers arise from exposure of the blood to miasms in the atmosphere, that the infection is received during respiration, and through the lungs, where we have actual proof that the corpuscles are naturally changed in properties and color; and if not so changed, that they carry within them a poison through the body which disturbs the functions of the brain.

It seems opposed to all reason to infer that the smallpox virus, a matter of definite quality and action, often generated in the blood in very large quantites in a few days, should be referred to the plasma, a fluid of variable composition, when all analogy bases it in the corpuscles.

Upon these grounds, we put forth the following physiological interpretation of the phenomena which succeed the introduction of the smallpox poison into the blood by inoculation. The corpuscles of the blood, passing in the vessels at the moment these are wounded and opened by the instrument which introduces the virus, are the first affected by it; and from them the rest of the corpuscles are infected by contagion, or contact action. The spreading of disorder from corpuscle to corpuscle, throughout the blood, is denoted by the fever which rises daily greater and greater, until inflammation and pustulation are estabiished.

The physiological demand is here deemed analogous to that where abscess and ulceration is established for the expulsion of a thorn or a slough. That is to say—in thorns, sloughs, and necrosis of bone, the demand is for the expulsion of an injurious body from the solid texture (the common tissue.) In smallpox and other fevers, the demand is for the expulsion of some hurtful matter from the plasma of the blood In both examples, forms of inflammation are the phenomena.

Life is a state of constant antagonism to the forms of dead matter; and any injury or decomposing tendency excites reaction. The

corpuscles of blood, infected with a contagious poison, therefore, react against it; they excrete, throw off, or free themselves from the virus, and their countless multitude gives quantity to the products. The prosecution of the virus then devolves upon the plasma; and in smallpox, inflammation and pustulation in the common tissue of the skin is established for its final expulsion and the patient's recovery.

It is of no consequence to our interpretation of the reproduction of the virus of smallpox, how the rival claims of chemistry and physiology are disposed of; for, whether the contagion does spread through the blood from particle to particle, in the manner of a chemical ferment, or whether from corpucle to corpuscle, as from one living body to another—whichever form of words or ideas is chosen, the proposition that the corpuscles are the particles of the blood through which the poison operates is agreeable with, or remains unshaken by the acceptance of either explanation. But, whatever be the order of our conceptions as relates to the regeneration of contagious poisons in the blood, whether chemical or vital, the same ought to be carried out in its consequences. Therefore, if the origin of the smallpox poison be referred to a chemical ferment, the origin of other poisons in plants and animals, ought also to be referred to chemical action. Should this be done, we may truly dismiss vital action and vital conceptions altogether from the scene. Are we yet prepared to go these lengths? Much consideration, we think, is demanded before an affirmative answer be given.

The assumptions necessitated upon either view of the phenomena of smallpox disease, may be considered as in favor of the physiologist. On the one hand, by the chemical philosopher, it is assumed that yeast is decomposing gluten; that the growth of yeast is a progress in decay; that the smallpox virus is in a state of intestine motion, and that this commotion is communicated to some unknown particle or ingredient in the blood. On the other hand, the physiologist does no more than state that yeast is a living plant; that the corpuscles of blood are living organisms with the properties of other cellular bodies, namely, growth and metamorphosis, and that some of them, infected by injurious matter imbibed from the air or otherwise introduced into the blood, communicate disorder to the rest by contagion, or contact-action. Of these two interpretations, the chemical one is unsatisfactory, because it breaks up all our ideas of peculiarities in living bodies; it leaves unexplained numerous other examples of contact-action in physiology, and it refers indefinitely to particles in the blood, without distinction between the plasma and the corpuscles; whereas, we point specifically to bodies floating in the fluid of the blood of the same class or kind with other bodies which are known to generate poisons, both in animal and vegetable structures, and which, moreover, in the human structure, do unquestionably generate and contain the matter or poison of venous blood. Lastly, there seems a preponderance in favor of the interpretation which bases the phenomena of smallpox fever upon the corpuscles of the blood rather than on the plasma; because, as we have said, in all instances known of the generation of poisons in living

bodies, animal or vegetable, the production of the poison is a function of analogous bodies.

The generation of a contagious virus in the blood and symptoms of fever go together; therefore, if the production of the virus be rightly ascribed to abnormal metamorphosis of the corpuscles, phenomena of fever must be based upon the corpuscles. It is to be examined, therefore, by what facts we support this more general conclusion.

Gout is a disorder attributed to altered qualities of the blood. Yet it forms a strong contrast with smallpox and other fevers; and from this contrast the suggestion arises, that if in either of the two diseases, gout or smallpox, the *materies morbi* can be fairly located to one part of the blood, the place of the other will have been found.

Now the close dependence of the plasma upon articles of diet, and the argument that the plasma may become distempered without necessarily involving the corpuscles, have been discussed. Gout is a disorder substantiating the argument. For its access is promoted in a very remarkable manner by a full and luxurious mode of living; and the more surely, if this be conjoined with a sedentary and inactive habit, which is known to produce inactivity in the depurating organs. The attack commonly comes on without previous warning. The person goes to bed and to sleep, thinking himself in his usual health, and is awakened in the middle of the night with pain and inflammation in one of his feet. If there be any previous indications of the approaching attack, they are referable to the digestive and depurating organs; such as diminished and high colored urine, diminished appetite, flatulence, and, perhaps, some slight diarrhœa, or its opposite, constipation.

In gout, inflammation is the primary and diagnostic phenomenon. That it is a depurative action, is shown by the result. There is no fever. A *materies morbi* is deposited at the place of inflammation; but this is not contagious. By proper medical treatment the natural depurating organs—the skin, bowels, and kidneys—may be stimulated to assist in removing the offending matter from the blood, so that the inflammatory reaction may be either shortened, mitigated, or altogether extinguished.

In contrast with this sketch of the phenomena in gout, contagious fevers arise in a different way; not through errors in diet, but from poisonous substances inhaled by the lungs or ingrafted into the blood. Symptoms of fever are primary features of the disorder. A contagious virus is generated in the blood, and inflammation is consecutive or secondary, following after symptoms of fever, because the plasma is distempered, not primarily, as it is by errors in diet, but consecutively, through the excretions of the previously diseased corpuscles.

These statements, we apprehend, contain the ground of distinction between erysipelas, as a local inflammation, and erysipelatous fever; rheumatism and rheumatic fever. In the local inflammations

without fever, the plasma only; in the fevers, both corpuscles and plasma are disordered.

As this is an important point of our subject, let us recapitulate the facts:

Diet replenishes the plasma; and the plasma is the part of the blood from which elements of repair and inflammation are taken. Unwholesomness of diet disorders the qualities of the plasma, and produces gout, an acute inflammation without fever; and morbid matter from the plasma is deposited at the places of inflammation. There are other inflammations where evidence of a depurative action upon the fluid of the blood appears.

Air acts directly on the corpuscles of the blood, which are bodies with the properties of cells. From substances in the air, fever arises; and in fever, a contagious poison is generated in the blood. The corpuscles of the blood naturally contain within them the matter of venous blood, which is poisonous to the brain. And in other instances—in vegetable and animal structures—bodies, analogous to the blood-corpuscles, are the organisms in which poisons are produced.

From these facts, we draw the general conclusion that abnormal metamorphosis or disease of the corpuscles of blood, is the antecedent of fever; and distemperature of the plasma, the antecedent of inflammation.

XI. *Inflammation as a Therapeutical or Depurative Reaction, in Cases of Fever.*—In some fevers, or in some cases of fever, the natural depurating organs are sufficient: or, by proper medical treatment, they may be roused to a sufficiency for the elimination and discharge of the morbid matter made over to the plasma from the diseased corpuscles. If this can be accomplished, there will be no call or necessity for any preternatural depurative reaction between the plasma and the common tissue. In such case, therefore, the person has, and must go through, the fever; that is to say, the blood corpuscles must pass through the phases of their disorder; but he is saved, by judicious medical treatment, from a local inflammation, because distemperature of the plasma, consequent upon disorder of the corpuscles, is met and relieved by the natural working of the depurating organs. These organs act upon the plasma; and inflammation is an action between the plasma and the vessels. By one or the other, or by both ways, the fluid of the blood may be relieved of hurtful matter; and as the severity and duration of symptoms of fever are a measure of the severity and duration of disorder in the corpuscles, so, we apprehend, the severity and duration of the consecutive inflammations are a measure of ease or difficulty with which the morbid matter separates, or sloughs off, from the rest of the fluid, and is made over to the common tissue for discharge. But, in cases of fever, we apprehend that neither the natural organs nor inflammation can effect this depurative purpose, so long as disorder is limited to the corpuscles.

The *materies morbi* of the corpuscles—of whatsoever nature this may be—must leave them, and be discharged into the plasma, before

any depurative means can come into play for the final expulsion of it from the fluid of the blood. This appears to be the *rationale* of our inability, by any means which have hitherto been tried, to cut short the progress of fever.

The argument respecting the therapeutical properties of inflammation in distemperatures of the fluid of the blood was partially discussed in the first lecture; and we now proceed with what further we have to say on this subject.

Case.—At 8 o'clock in the morning of Dec. 28th, a physician, who was assisting at the *post-mortem* inspection of the body of a lady who had died of puerperal peritonitis, unfortunately pricked his finger. Twelve hours afterwards, he felt some pain at the part; and he had it touched with nitrate of silver. During the night, shiverings came on, and he felt extremely restless. On the morning of the 20th—the next day—the finger was swollen, and red lines extended up the arm. In the evening of that day, the symptoms were not abated, and there was great prostration. On the 30th, the hand and arm were greatly swollen, the glands in the axilla were affected, and the pain was very great. On the 31st, the pulse beat from 90 to 100 in the minute; and the breathing was heavy and irregular, with torpor and drowsiness. In the evening, all the symptoms were increasing; and now an erysipelatous blush from the axilla extended over the side of the chest. During the night, the breathing became difficult, and the drowsiness passed gradually into deep stupor. Death took place at six o'clock in the morning of January 1st, not quite four days from the infliction of the wound.

In this case, the phenomena, in all important respects, are similar to those observed in traumatic erysipelatous fever, and in puerperal fever. The circumstance of the disease arising in the manner related—namely, from innoculation of a poison from the body of another person who had had the puerperal fever—establishes the relation between it and the contagious fevers, and shows that the fatal termination in so short a period is to be attributed, not to inflammation, but to disease of the blood. If this be assented to, the case is taken out of the category of inflammatory diseases, and is placed in that of blood diseases.

But if this and analagous cases—if erysipelatous fever, puerperal fever, gout, smallpox, and the other exanthematous fevers—be considered as blood diseases, a great step indeed will have been taken, in the direction we are arguing, towards removing inflammatory reactions altogether from the pathological list; and a wide avenue is opened for a reconsideration of their true import.

Moreover, much doubt is thrown upon the value of the labors of the pathological anatomist, who may regard effects left by internal inflammation in fatal cases of blood-poisoning as showing anything whatever of the nature or seat of the disease. For the question arises, whether inflammation, and the suppurations which may appear in contagious fevers, are not appropriately placed in the same class with inflammation and suppuration in smallpox, sloughing carbuncle, and necrosis of bone; all of which are indisputably thera-

peutical reactions, the only difference being that, in the one class of cases, the actions arise for therapeutical purposes in the solid parts—the common tissue; in the other, for therapeutical purposes having reference to the fluid of the blood.

If we impartially review phenomena of inflammation as a matter of natural history, and begin with the simplest cases—scalds, burns, sloughs, and fractures (injuries to the common tissue), and boils, eruptions, gout, and smallpox (from injury to the qualities of blood)—we can scarcely fail of perceiving, in both classes, that the forms and amount of the action depend upon, or are governed by, the amount or extent of injury sustained. And, if hindrances protract the process of repair, so also analogous difficulties protract depurative forms of inflammation. If keeping peas in a sore protracts granulation and discharge, so also perseverance in unwholesome articles of food will protract ulceration. In mechanical injuries, the cause of the injury (the heel of the horse, or the cart-wheel), the part injured (the torn flesh, or the broken bone), the extent and nature of the hurt (contusion, laceration, and comminution)—all these, and also the subsequent reaction (the process of repair), are objects either of sight or of touch, or of both. On the other hand, in injuries to the blood, all these things are, and to a great extent, must remain, matters of reasoning and deduction. We have said, that very little can be demonstrated of the vital and depurating processes constantly going forward in the blood of the living person. In the engrafted smallpox, it is true, the poisonous matter introduced into the blood, and the consequent inflammation and suppuration in the skin, are seen; but the essential part injured—the elements of the blood—the extent of their injury, and the depurative reactions going on amongst them, and which connect the introduction of the virus with the fever, and the subsequent inflammation and suppuration, are not seen. Likewise, in the fatal case just related, there was evidence of the introduction of poisonous matter into the blood through the wound of the finger; but the rapidity with which it spread throughout, and destroyed the normal quality of the blood, was only to be proved by the rapid course of the symptoms and the fatal termination. In this case, we argue that the inflammation and swelling of the glands in the axilla were reactionary efforts to arrest the course and eliminate morbid matter, though they failed; and they failed upon the same ground that similar efforts fail in cases of severe mechanical injury; namely, because the injury inflicted on the blood was so great that life succumbed before measures of relief could come effectually into play. In severe mechanical injuries, persons sometimes die before, or soon after, a process of repair is established; so likewise, in injuries to the blood, persons will die before any inflammation appears.

XII. *Diseases of the Corpuscles of Blood.*—With respect to disease or abnormal metamorphosis of the corpuscles of the blood, and its association with symptoms of fever, numerous observers have described their darker color, and the easy transudation of their coloring matter in typhus. Denis, for example, describes the blood in typhus fever as deficient in fibrin. He says that air had no effect in

reddening it; and on analysis, it was found to contain ammonia. Dr. Armstrong observed the blood in typhus from the temporal artery as dark as that from the veins.

The general appearance of blood in malignant fevers has been described by Huxham and Fordyce. At the first commencement of symptoms of fever, the blood was sometimes buffed; but the clot beneath was always of a loose texture, scarcely cohering, and very dark in color. If the patient was bled two or three days after the onset of fever, the blood was found incoagulable, having the appearance as when spirits of hartshorn is added to blood as it runs from the vein, which darkens its color and prevents coagulation.

In the yellow fever of the West Indies, blood has been observed to be hotter than in health. As fever progresses, it becomes black and thin. Dr. Blair says that, in many instances the corpuscles were found so much dissolved that, in several specimens of fever-blood, but few of them could be observed.

It has been found that a diminished amount of carbonic acid is discharged from the blood by respiration in cases of fever; and this fact, taken in conjunction with the dark color of blood, is conclusive as to one, at least, of the functions of the corpuscles being disordered in fever.

Rokitansky, Simon, Perry, and many other accurate observers, all speak of the dark color and changed state of the corpuscles of blood in malignant fever, of the incoagulability of the plasma, and of the staining of the tissues and of the serum by the coloring matter which transudes the corpuscles.

As regards the microscopical appearances of the corpuscles of blood in fever, we hesitate at present to lay any stress upon them; because in persons in health, they very speedily change their figure and outline in a very uncertain manner. Some of them become notched with projecting points, and otherwise changed in outline; others assume globular forms; they are influenced as respects these changes, it would appear, by the temperature of the glass upon which they are received for examination, and by the way in which they are covered by the thin glass. Some are seen paler, and some smaller than others; some adhere closely together in rolls, others float about separately without the least disposition to adhere to their neighbors. All these varieties may be seen in the same small quantity of blood which is alone available for microscopical inspection, especially if the exterior edges of the film of blood be brought into the focus of the microscope.

Notwithstanding these obstacles to the drawing any positive conclusion from the microscopical appearances of the blood-corpuscles in cases of fever, it is quite as likely to be by the microscope as by chemistry that future advances in the pathology of these bodies will be made. For how can any bulky chemical manipulation satisfactorily eliminate results from the plasma from results from the corpuscles? especially if, under the influence of reagents, as we shall show, they throw out matter from their interior into the fluid in which they swim, and yet preserve their integrity or individuality.

"Hitherto, at all events," as Rokitansky has well observed, "chemistry cannot be said to have excelled, as respects the pathology of these bodies, the achievments of a circumspect anatomical survey, notwithstanding the limited resources at the disposal of the latter.

Experiment 1.—Take a slip of glass, such as is used for mounting microscopical objects, receive on it a very small drop of blood, and place close to it with a pipette a drop of any fluid, chloroform, ale, weak sugar and water, etc., and the quantity of extraneous fluid should not exceed the quantity of blood. Upon now dropping on the two fluids a thin piece of glass, their nearest edges will mingle, but in various proportions.

In these experiments we find the *outline* and the *interior* of the corpuscles of extremely various appearances in the same experiment, but nothing appears thrown out from them.

Experiment 2.—Proceed as in the last experiment, but let the fluid used be sherry wine. The corpuscles, along the line where the blood and wine mingle, will soon begin to throw out molecules around their circumference, many of which pass away into the fluid; others grow out into long tails, which remain attached to the corpuscles, and terminate in a knob. They also wave about in a very singular manner. After some time, (half an hour,) the tails or filaments become nodulated, and then break away from the corpuscles, and when they have done so, they continue their singular movements in the fluid.

Some years ago, when making observations on the plasma or liquor sanguinis of the blood, drawn by venesection in cases of fever and inflammation, we observed in the fluid a vast multitude of minute molecules. (*Medical Gazette*, vol. ii., 1841–2.) And the molecules seen in the experiment here related, are precisely the same in magnitude and appearance as those we saw in the fluid of blood drawn in the cases of fever. Now we believe that the blood-corpuscles do not immediately lose their vital or chemical properties when withdrawn from the body. Therefore, we regard the remarkable forms and actions they exhibit under the influence of sherry wine, as phenomena of a species of reaction, which, amongst multitudes of them, is various or unequal, hence the various appearances presented. In some, the resistance offered to the extraneous fluid is more easily overcome than in others.

We have frequently examined with the microscope blood taken from persons affected with scarlet fever, with reference to the appearances in the plasma, and have always noticed the following facts. The colourless or plasma corpuscles are much more numerous than in persons in health, and especially so if the blood be drawn from the skin as the fever is passing off and the epidermis beginning to exfoliate. They are of different sizes and present different appearances. In the open spaces between the rolls of the red corpuscles, irregular masses of granular matter and numerous free molecules are seen floating in the fluid.

In cases of diphtheria, we find that the plasma presents the same appearances as are seen in scarlet fever. Formerly we supposed the free molecules observed in the plasma of blood, drawn in cases of fever and inflammation, to be derived from the colourless corpuscles; but now that we have seen them thrown out by the red corpuscles, there is actual proof that these corpuscles, in their reactions upon extraneous substances, do themselves throw off matter into the fluid in which they swim. The appearances, then, which we have seen in the fluid of the blood in cases of fever, and the behavior of the corpuscles in the experiment we have related, appear to corroborate our conclusions respecting the excretions of the corpuscles passing into the plasma, and the association of these excretions with phenomena of fever.

Before proceeding with our argument, it will be convenient now to refer to some collateral incidents which require our notice.

First, it may be objected to our proposition respecting the antecedent of fever, namely, disorder or disease of the blood corpuscles, that in venosity of blood, where a poisonous element of the corpuscles fails of being discharged by respiration, the symptoms are those of brain disturbance and not of fever. In *morbus cæruleus* there is no fever necessarily.

To this objection it may be replied, that the presence of a venous quality in the corpuscles does not imply disorder or disease in them, in the same way that it is concluded to arise from miasms in the air. The substance—carbon or other matter—which gives to the corpuscles their venous character, is a substance natural to them, an essential ingredient of their composition in certain parts of their course in the circulation. Therefore, it is to be expected, it would occasion no unusual reaction on the part of the corpuscles themselves, though the brain suffers; whereas, a poison from the air may be presumed something quite heterologous to the corpuscles, and doubtless they react with more energy against a foreign injurious matter, than against anything which is a part of their normal composition.

In cases of blood-poisoning through the stomach, such as drunkenness from alcohol, narcotism from opium, and salivation from mercury, the locality and character of the symptoms point out which organ it is, that suffers first or most from a particular poison diffused through the plasma. And if in these examples fever be absent, the argument is, that the parenchymatous organ is affected before the corpuscles of the blood, fever appearing when they partake of the disorder.

In cases of blood-poisoning through the lungs, on the contrary, the symptoms begin with fever, and the argument is, that the corpuscles of blood are here affected first, before the plasma or any of the local parenchymata; fever denoting an abnormal metamorphosis of the corpuscles.

A venous state of the corpuscles of blood is not an abnormal metamorphosis. The condition comprehended in the term venous is one natural to them. Misplaced venous corpuscles disorder the

brain; but fever does not appear, because the venous state is natural to the corpuscles. The absence of symptoms of fever, when venous blood circulates arterially, is therefore no valid objection to the proposition we are arguing.

Again, we have hitherto purposely abstained from any reference to the brain or nervous system as causes of fever and inflammation, not because we underrate their powerful influence over blood and the secretions, but because so important a part of our subject requires a special consideration, which we can here but briefly indicate.

It has been argued in the former lecture, that the elements of the parenchymatous organs and the corpuscles of blood have the common properties of other living cellular bodies; and among these are properties of affinity, which differ in relation to different substances. And there can be no doubt that the corpuscles of the blood, as respects the various substances they encounter in their course during circulation have much more intimate relations with (or a greater affinity for) some than others. For example, in the lung, a special reciprocal action takes place between the corpuscles which are within the vessels and the air which is outside them. And, as if to facilitate this action, the coats of the blood vessels in the cells of the lung are reduced to an extreme degree of thinness.

Now, it may be argued of any other special organ, where the coats of the capillary vessels are reduced to a still greater degree of thinness than in the lung, that they are so for a similar purpose. Thus, in the brain, an organ very largely supplied with blood, the coats of the extreme vessels are so thin that we fail to trace them in all their various ramifications; indeed, so entirely are they altered that the elements of the organ have but a slight coherency. And, unless the contrary can be shown, we may infer this disappearance of the ordinary properties of the blood vessels to be for the purpose of removing all obstacle to the closest possible contact between the corpuscles of the blood and the parenchyma of the brain. This inference is corroborated by the fact that the brain is the organ specially affected by an abnormal circulation of venous corpuscles. That is to say, the brain is the organ which first detects the presence of an abnormal venous quality in the corpuscles.

If, then, we may regard the thinning away of the coats of the capillaries of the brain as facilitating a contact-action between the corpuscles of blood and the substance of the brain; and if, moreover, we are able to appeal to the known effect of venous corpuscles upon the functions of the brain denoted by drowsiness, stupor, delirium, and coma, as proof of a special action between the brain and the corpuscles, then we may claim the constant occurrence of similar cerebral disturbances in fever as corroborative of the view which bases phenomena of fever upon abnormal metamorphosis of the corpuscles of blood; the brain—to use a chemical phrase—being the test of the condition of the corpuscles.

All the functions of a living body may be comprehended as a series of actions and reactions; and, if it be admitted that the cor-

puscles of blood do perform a special function in the brain, there must necessarily be reaction from the brain upon the corpuscles.

Case.—A young married woman, aged 19, was delivered of her first child. The labor was natural, and she went on favorably until the fourth day from her confinement, when her husband staid out late at night, and returned home drunk from a fair, very much knocked about. By this she was thrown into a state of great nervous excitement. Very shortly after she was seized with a numbness of the legs and shivering, and then with pain in the head and wandering of the mind. The secretion of milk was interrupted; the skin became hot and dry; no sleep could be procured; and the pulse beat 120 in the minute. The wandering of the mind passed into furious delirium, and all the symptoms of fever and excitement continued for several days. It was only by judicious medical treatment and careful nursing that the disorder was subdued on the seventeenth day.

In this case, we argue that the fever arose, not immediately from the nervous shock, but from disorder of the blood-corpuscles; and, as our researches have led us to interpose distemperatures of the fluid of the blood between errors in diet and inflammation, and disorder of the corpuscles of blood between aërial miasms and fever, so analogously of mental emotions and nervous shocks, when they occasion or aggravate fever or inflammation, we conclude they do so by disordering, or adding to the disorder, of one or other, or both parts of the blood. Errors in diet do not produce inflammation, unless the fluid of the blood be distempered; also a miasmatous air does not produce fever, except the blood-corpuscles be affected; so too, great convulsions and loss of consciousness (in epilepsy, etc.,) pass away without fever, if the blood be not affected. The close sympathy between states of the corpuscles of blood and the brain, then, supports our proposition that symptoms of fever and the generation of poisons in the blood are to be based upon disorder of the corpuscles.

XIII. *Two Species of Fever.*—In the last lecture, we said that the corpuscles of the blood derive materials of their growth and nourishment from two sources, namely, the atmosphere and the plasma; and that their excretions are discharged in two ways—partly into the atmosphere, as carbonic acid, and partly into the plasma. It follows necessarily that the blood-corpuscles may be disordered in two ways; namely, by injurious matter in the air, and by injurious matter in the plasma. Wherefore, if fever be the expression of disorder in the corpuscles of the blood, we should expect—because they may be injured in two ways—two forms of fever. And there are two forms of fever, designated respectively contagious and hectic fever. Having discussed the phenomena of contagious fever, we have now to speak of hectic fever.

The corpuscles of the blood, in common with other cellular bodies, have within certain limits, a power of resistance against injurious agents. It is not every passing impurity of the atmosphere, nor every injurious change of quality of the plasma, that establishes symptoms of fever. Nevertheless, poisoning substances in the air

do, we know, occasion contagious fever; and we propose to show that a sufficient debasement of the qualities of the plasma, by disordering the corpuscles, will produce hectic fever.

In necrosis of bone, it has been shown for what purpose inflammation arises; and why it fails, or is hindered of cure. The persistence of the hindering cause—the dead bone—gives chronicity or permanence to suppuration, ulceration, and fistulous openings in the flesh. It is notorious in these cases, and in the analogous ones of diseased joints, that hectic fever, sooner or later appears; and the sooner, if the person with his permanent source of illness, (the chronic suppuration,) be also exposed to privations, hardships, or unwholesomeness of food. Again, inpulmonary consumption, where the blood is continually passing and repassing numerous places of suppuration, hectic fever appears. Numerous other examples might be given; but these are sufficient to show that protracted forms of inflammation—namely, chronic suppurations and ulcerations—are in some way, antecedents of hectic fever. Now, when inflammation, suppuration, and ulceration are hindered and protracted, spoiled material from the places of suppuration may ebb back by the roots of the veins into the plasma.

In proof of this, we may refer to the great work of Rokitansky, his *Pathological Anatomy;* and we shall quote the thirtieth experiment related in the third series of our own experimental researches.

"*Experiment* 30.—Select a small light colored frog, with as few pigment spots as possible, because these obscure what is going on in the vessels. Irritate the web of one of the feet by immersion in tepid water (97° Fahr.) for thirty seconds, and afterwards gently scratch it with the point of a needle, taking care not to wound or open any of the blood vessels. At the expiration of an hour or two, upon examining with a microscope, several of the capillaries and small veins will be seen crowded with colourless corpuscles. Now let a weak solution of potash—one part of the alkali to three of water—be lightly brushed over the web with a camel's hair pencil, immersing the foot in cold water immediately after. In blood vessels thus treated, we have seen red corpuscles glued together, and lumps of colorless matter passing away from the sphere of irritation, along the widening channels of the small veins. Or these morbid matters, becoming stationary, have been the means of dividing the current of the blood into two streamlets within the vessels."

Such an experiment as this proves that local changes in the qualities of blood may be produced in places of irritation; and if in places of irritation, then also in places of inflammation and suppuration. And it shows, we think, in a satisfactory manner, how the mass of the plasma may become distempered by any continual ebbing back of spoiled material from places of protracted suppuration.

No one can doubt that the fluid of the blood is altered, and may be distempered, by unwholesomeness of diet, and by neglect of the daily excretions by the skin, bowels and kidneys. It is also evident that these common sources of distemperature of the fluid of the blood must operate not only in persons in health, but also in persons who may

be afflicted with chronic forms of inflammation, such as are present in necrosis of bone, in diseased joints, pulmonary consumption, etc. And if, in these last mentioned examples, distemperature of the fluid of the blood from errors in diet, or other such causes, concur with distemperature from absorption of spoiled matter from places of chronic suppuration, then there will be *deuteropathy of the plasma*, or disturbance of the qualities of the fluid of the blood from two points at the same time; namely, unwholesomeness of food and absorption of morbid matter. And it follows from the physiological relations subsisting between the corpuscles and the fluid of the blood, that an increasing debasement of the qualities of the fluid *must* at length disorder the corpuscles.

But one of the chief points we have been arguing for, is the therapeutical relations of inflammation to the fluid of the blood. We have said that suppuration is a means whereby injurious matter is eliminated from the plasma; that granulations and pus may perform the office of a depurating organ vicariously. Now we are saying that chronic suppuration and ulceration will occasion deuteropathy of the plasma and thereby fever. This seems an incongruity. A little consideration, however, will show that it is only seeming incongruity. Diet sustains life and health only by measure; it is pathological in excess and by deficiency. Heat or temperature contributes to life and health only by measure. Oxygen, an essential constituent of the atmosphere, is an element of health and life only by measure; any great variation from a mean amount is pathogenetic. Too much or too little would equally occasion disturbance of health.

So likewise, of the matters we are discussing; the process of repair in the commonest injuries has its pathological as well as its therapeutical aspects. The reaction upon which cure depends, may be too much, or too little, or too long about. Granulations may be languid, or indolent, or deficient; or they may luxuriate, and usurp the place of fibrous tissue when fibrous tissue is needed for reparation. And fibrous tissue may hold its ground when osseous tissue is demanded for cure. This is sometimes the case in fractured bones. In ordinary contusions, great swellings appear and disappear. In their appearance, matter from the plasma of the blood must have become stationary in the part. In their disappearance, this matter must have been absorbed again into the blood. There must be, therefore, in these cases, in some way or other, a ready passage for elements from the injured tissue into the fluid of the blood.

Analogously, inflammation, as a depurative reaction in distemperatures of the fluid of the blood, may be hindered and interfered with in various ways. There may be too much or too little of it; and certainly it is very often protracted by the persistence of the blood distempering causes. If, then, there be a ready passage—to and fro, as it were—between the fluid of the blood and the common tissue, it is not difficult to perceive that interference and hindrances may interrupt, or even reverse, the action in this particular

The ordinary process of repair, then, has a double aspect; and so, also, has inflammation. And our argument is, that protraction or chronicity in either of them introduces the liability to absorption of spoiled material, and that thus therapeutical reactions may operate retroversely and pathologically upon both parts of the blood; the fluid first, and then the corpuscles.

But, that we may give an outline of the argument as it relates to hectic fever, we take as examples necrosis of bone, gout and scurvy; and, in contrast with these, scarlet fever.

Necrosis of bone produces inflammation. There are hindrances to the removal of the dead bone; therefore, inflammation passes into protracted suppuration and ulceration. These gradually weaken the patient; they disable him from taking exercise; digestion is impaired; and the functions of the depurating organs are disturbed.

This is one source of distemperature of the plasma. Distemperature of the plasma aggravates the existing inflammation; but the antecedent—the dead bone—cannot, in the case we are contemplating, be removed. Therefore disorder must proceed, until at length, from the places of suppuration, morbid matter ebbs back into the circulation; and the plasma, thereby thoroughly disordered, reacts upon and disorders the corpuscles, and hectic fever, more or less, appears. Upon this interpretation of the sequence of events between dead bone and fever, to cure the fever the blood-corpuscles must be relieved from their disorder; to relieve them, the qualities of the plasma must be improved; to amend the qualities of the plasma, the chronic suppuration must cease; and that chronic suppuration may cease, the dead bone must be taken away. We all know that the effectual removal of the dead bone will cure the fever.

Errors in diet by excess produce distemperature of the plasma. And if the depurating organs, or some of them, fail in removing the distemperature, inflammation arises. In gout, the patient is surrounded with every comfort. The error in diet is most probably one of excess; it can, therefore, be easily interdicted; the antecedent can be readily removed; and, by medicine, the depurating organs can be stimulated to a more active working. For these reasons, distemperature of the plasma is concluded to be simple; its qualities are disordered from manageable sources, which may be attacked and abolished before disorder is communicated to the corpuscles. Inflammation in gout, is, therefore, acute, and without fever.

On the other hand, in scurvy, the errors in diet are those of deficiency or unwholesomeness, and are much more difficult to deal with, especially where persons are crowded together in unhealthy localities, or limited to camps or ships. The individuals are poor, or, from other circumstances, cannot command the necessaries of life. Therefore, forms of inflammation, which in the rich are simple and acute, are here (or in the poor) chronic, and pass on to suppuration and ulceration, as in the sailors before mentioned, whose bare legs and feet were bitten by musquitoes; upon which example we

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observed, that, because the unwholesome diet and confinement could not be changed, therefore the bitten parts passed into chronic ulcers. And if, in persons thus situated, with forms of chronic ulceration from continued unwholesomeness of diet, or other privations, morbid matter should be continually ebbing back into the circulation from places of chronic ulceration, the elements of fever, from a double debasement of the plasma, would exist; and fever thus arising, would obviously be different from fever arising through miasms in the air.

In scarlet fever, it is concluded, from premises which have been argued, that disorder of the blood begins not with the plasma, but in the corpuscles. The illness commences, not with forms of inflammation, but with symptoms of fever. There has been no error in diet; a miasmatous air has acted on the blood; a specific poison is generated; and the plasma is distempered posteriorly to disorder of the corpuscles. But (here as in smallpox) on natural depurating organ seems adapted for the removal of the poison of scarlet fever from the plasma; therefore, inflammation arises—that is to say, reactions between the plasma and the common tissue. The forms, amount, and duration of inflammation in scarlet fever, indicate the amount and severity of the disorder of the blood. Without these reactions, the patient would die from a poison shut up in the blood; with them, in their severest forms, there is a battling for life. When a joint has been crushed, death would take place from mortification, where there is no reaction; but, this established, the patient is saved from the first and most pressing danger, though afterward he has to pass the ordeal of inflammation, abscess, suppuration, ulceration, and very probably hectic fever too, as best he can, or suffer amputation for a chance of life. In scarlet fever, to cure the inflammation, the plasma must be freed from poisonous matter; and no more must enter it. That no more may enter it, the corpuscles must cease to generate and excrete a poison. Now, from the course observed in normal cases of an exanthematous fever, we may probably conclude that the corpuscles pass through their disorder in from four to six or eight days. When their disorder has passed, no more poisonous matter is discharged from them into the plasma; and, no more poisonous matter mingling with the plasma, the inflammatory reactions and the natural depurating organs together succeed in restoring the plasma to its natural state; whereupon the blood regaining its normal constitution, inflammation comes to an end, and the patient is cured. The pathological and therapeutical sequences are the same as in small pox.

In the midst of these therapeutical actions and reactions for the depuration of the blood in fever, it would seem that a depurating organ is sometimes coerced, as it were, to an increased and incongruous working; matter not naturally found in the secretion of the organ appearing in it at the crisis of the fever. In the performance of this enforced duty—the elimination of poisonous matter from the plasma—the parenchymatous elements of the organ may be overtasked and injured. Thus, in scarlet fever, the poison in the blood sometimes

occasions parenchymatous disease of the kidneys; and in such cases there is evidence also of inflammatory reactions in the common tissue of the organ. This complication may have the same reflex effect upon the blood as chronic ulcerations. Spoiled material from the overburthened kidneys may ebb back into the circulation, and a new blood distemper may be inaugurated from elements of urine retained in the plasma. Such being the case, there would be present the antecedent of a second or reactionary fever; namely, deuteropathy of the plasma—that is to say, distemperature—from disease of the kidneys, superposed upon the remnant of the poison of scarlet fever. And it is in perfect accordance with the argument that a secondary fever from disease of the kidneys should be more apt to appear as a consequent of the primary fever, where the inflammatory reactions in the skin are too slight or insufficient for the full and effectual discharge of the poison. But it is to be observed, that the second fever is not a relapse or reappearance of the first; it is another fever of different origin. The first fever was occasioned by an aerial miasm; the second is occasioned by a debasement of the plasma acting injuriously on the corpuscles of the blood.

Let us, in concluding this lecture, give a brief summary of the facts and of the arguments.

In necrosis of bone, the pathological series begins with dead bone. If this cannot be taken away, it ends with fever. from deuteropathy of the plasma disordering the corpuscles of the blood.

In pulmonary consumption, the pathological series begin with tubercles in the lung. There are hindrances and difficulties in their discharge; suppuration is made chronic; and the phenomena end with fever from deuteropathy of the plasma.

In scurvy, the series begins with unwholesomeness or deficiency in diet, or other privations which cannot be changed. Ulcerations arise; and the series may end with fever, from deuteropathy of the plasma.

In these examples—namely, hectic fevers—disorder of the blood corpuscles is posterior to a debasement of the fluid in which they swim; and forms of inflammation, protracted for longer or shorter periods, precede the fever.

On the other hand, in the contagious primary fevers, the pathological series begins with disorder of the corpuscles. It ends with forms of inflammation; because distemperature of the fluid of the blood is, in these fevers, posterior, to disorder of the corpuscles. Thus we interpret the relations of fever to inflammation, and of inflammation to fever, by the difference between the two parts of the blood. The facts are, that sometimes fever precedes inflammation, sometimes forms of inflammation precede fever; because sometimes (from aërial poisons) the corpuscles are disordered before the plasma; and sometimes (from unwholesome diet, privations, and chronic ulcerations) the plasma is disordered before the corpuscles. If you accept these interpretations, the whole subject of repair, inflammation, and fever, presents a coherency which is worthy of your attention.

Thus:—

Mechanical objects injure the common tissue; and the process of repair arises.

Errors in diet disorder the plasma; and inflammation appears.

Miasms in the air affect the corpuscles of blood; and primary fever is the result.

Both the process of repair and inflammation, from hindrances and difficulties, may pass into chronic or protracted forms of suppuration, ulceration, and discharges; whereupon, if spoiled material should enter the circulation, and, by reiteration or quantity, thoroughly debase the plasma, the corpuscles suffer, and fever appears; namely, reactionary, hectic, or a plasma fever.—*British Medical Journal*, May 14, 21, 28, 1859.

A Visit to the London Hospitals. By E. D. FENNER, M.D., of New Orleans.

MY DEAR B.—I arrived at this great metropolis on the 7th instant, after a very pleasant journey from the time I left home, and have been recently so busy seeing novelties and wonders, that I begin to feel tired of it, and must soon change the scene. Among the many and various interesting objects that have attracted my attention in London, I have not overlooked its great medical institutions, and I beg leave now to offer you the following crude observations upon such of the hospitals and distinguished medical men as I have seen. I must here acknowledge my obligation to our old friend and quondam fellow-citizen, Dr. G. T. Browning, for his very kind courtesy ever since I have been in the city.

ST. THOMAS' HOSPITAL.

June 13th.—Dr. Browning accompanied me to this venerable institution, which dates back to a beginning in the year 1213. It was first an almshouse, but in 1552 was endowed and incorporated by King Edward VI., whose statue now stands in the yard, and was erected in 1737. It looks like the statue of a boy of sixteen years. In the front yard is a statue of Sir Thomas Knight, erected in 1714, one of the earliest and greatest benefactors of this institution. We walked through wards, consisting of very large rooms, with beds on each side. Everything looked very neat and comfortable. The head nurses are very intelligent women, who have very nice apartments, and receive good wages. There is a Magdalen ward for venereal diseases; only seven or eight cases in at present. The general wards were not full. The operating room is extremely small, plain, and antiquated. We followed some students into the lecture room, and sat down to hear a clinical lecture by Dr. Barker. There were only four students present when he began, but ten more came in afterwards. He commenced a slow sort of Presbyterian style of reading reports of cases, with minute detail of symptoms, and hardly

ever looking up at his audience, which soon produced such a soporific effect on me, that I thought it best to retire, and we did so, I think, without his observing us. I was unable to procure any report of this hospital.

WESTMINISTER HOSPITAL.

Operating Day.—Tuesday, June 14th, 1859.—My friend, Dr. Browning, failing to meet me at twelve o'clock, I determined to go to the hospital without a conductor. On entering, saw a young man who told me there was no impropriety, and showed me the way to the operating room. At the door we met Mr. Holt, one of the surgeons, to whom I introduced myself, and received a polite invitation to accompany him and take a seat near by. There were two other surgeons present, Mr. Brooks and Mr. Morehouse, who belonged to the hospital and had operations to perform.

Operation 1.—*Removal of a small fibrous tumor* from the breast of a young woman. She was put under chloroform, and the tumor soon removed, with a considerable portion of the mammary gland. Two or three small arteries were tied, and the wound sewed up with *silver* sutures.

Operation 2.—*Lithotrity* in a man who had suffered from severe stricture of the urethra, and also stone in the bladder. The stricture had first been relieved, and then the stone was crushed. He had undergone the operation twice before this. He was put under chloroform, and with some difficulty a piece of the remaining stone was found and crushed. Mr. Holt said that he now only performed lithotomy when lithotrity was forbidden by some peculiarity in the case.

Operation 3.—*Stricture in the urethra.*—Man, aged about thirty-five, and rather weak in the lungs. On this account, Mr. Holt would not use chloroform. He used an instrument for *tearing* open the stricture. It was quickly done, and the pain only momentary. Mr. H has a steady hand, and is a nice operator.

Mr. Brooke now took the stand.

Operation 1.—*Removal of external piles* from a woman. She was put under chloroform, and it was done with scissors.

Operation 2.—*Hydrocele.*—In a man for a third time; a simple puncture with a trocar; no injection afterwards. Mr. B. said it was hardly necessary. Patient's penis had been amputated previously.

Mr. Holthouse, the third surgeon, then took the stand, and had nothing but one operation on the eye of a blind man. He removed a portion of the *lens*, but said it would not do much good.

I walked through the wards of the hospital, and found everything neat and comfortable. The operating room and lecture room both very small. There is a school now connected with this hospital, not chartered to confer degrees, but authorized to send applicants to the university as candidates. This hospital has 175 beds, and affords relief to about 2,000 in-patients, and 20,000 out-patients annually.

MIDDLESEX HOSPITAL.

June 15.—Dr. Browning accompanied me to this hospital at twelve o'clock, being operating day. Found nothing on hand; walked through the wards, and found the usual arrangement of large wards, with about twenty beds in each; low, iron bedsteads, and no curtains, divided into male and female, medical and surgical wards. The amphitheatre, operating or lecture room small, and very plain. Dissecting room small and very plain; on the ground floor of a back building, only one long table, suitable for six or seven subjects. In this building are also the apothecary and chemical rooms. Number of patients about 150. It is a fine hospital. Large number of out-patients, as in the previous.

ST. MARY'S HOSPITAL.

June 15.—This is one of the new hospitals; a fine, large building; large wards, with very high ceiling. I got the last published report, which was for 1857. The number of in-patients for that year was 1,480; out-patients 4,026; average number of in-patients, 143.

Operating Day.—Mr. Coulson, surgeon—a good-looking man, with a smiling countenance, apparently about fifty-five years of age; gray hair.

Operation 1.—*Removal of a small cheloid tumor* from the top of the sternum of a young woman—a simple thing, and soon over. She was put under chloroform.

Operation 2.—*Removal of a large morbid growth*, involving the right labium pudendi. He didn't seem to have any very definite idea about it, but cut out a considerable portion of it. She was under chloroform. In both these operations Mr. Coulson used the silk ligature. These were all the operations he had. The operating room or amphitheatre is larger and neater than any I have yet seen.

GUY'S HOSPITAL.

June 17th.—I took breakfast early and got to this celebrated old hospital about nine o'clock, with no other guide than a letter from my friend, Dr. Crawcour, to Dr. Odling, professor of practical chemistry in the medical school. I found a lecture going on by Dr. Oldham, addressing about thirty students in a very fluent and animated style on *deformities of the pelvis*. He is a good looking man, and is one of the professors of midwifery. The lecture being clinical, he entered fully into the propriety and method of premature delivery. At the close of the lecture we all followed him into one of the wards, and saw him perform the operation.

He did it with a long trocar, and very soon drew off about eight ounces of the liquor amnii. He then examined a new case that had just entered the ward—an intelligent looking-nervous young woman, with a countenance expressive of much anxiety and suffering. The doctor questioned her minutely relative to the previous history of the case, and then examined by the touch. He almost immediately shook his head, and said aloud to the closely-packed students around,

"*Malignant disease to great extent.*" No sooner had he said this, than the poor womon's countenance, which had been lit up with anxious hope, suddenly sunk, and she began to sob most bitterly, as if fully conscious that her doom was sealed. I could not but remember how often the French physicians and surgeons had been condemned for doing this very thing. If he had not pronounced the diagnosis in her hearing, it would have answered just as well, and the poor woman might have enjoyed the *delusion of hope* for some time, which would certainly be preferable to the pang of despair.

I then went into the labratory, and found Dr. Odling lecturing and demonstrating practical chemistry. Dr. O. is a very handsome and youthful-looking man, a fluent talker, and expert manipulator, He was a classmate of our Prof. Crawcour, and seems to be equally enthusiastic in his branch. At the close of his lecture he greeted me very cordially, and carried me through all the departments of this great hospital. The buildings cover a very large space of ground, and are well arranged into medical, surgical and maternity wards, laboratory, dispensary, pharmaceutical, dissecting and lecture rooms, museum and library. The house makes up about 500 beds; the in-patients average 500 constantly, and 5,000 a year. The *out*-patients number about 40 000 a year. All these London hospitals appear to have dispensaries attached to them. The museum at Guy's is very fine, (15,000 specimens,) and the library has eight or ten thousand volumes. The lecture-room would seat about 200. At this hospital is a bronze statue of Thomas Guy, its sole founder, in 1821, and a beautiful marble statue of Sir Astley Cooper.

From this I went to *University College Hospital*, with a note of introduction to Dr. Jenner. I found him busily engaged prescribing for *out*-patients. I sent him my note, and was soon invited to enter. I took a seat, and saw him examine a considerable number of patients, men, women and children. There was one case of intermittent fever, quite a rarity in these parts. Dr. J. examined the patients with great care before prescribing. All the children had to be stripped naked. He does not attend wards at this time.

Dr. Jenner is a nice, tidy-looking gentleman; hair black and very thin on the top of his head; of rather low stature, but stout; looks Scotch, but says he is English, and not related to Edward Jenner, of vaccine celebrity. After finishing his services, he kindly took me through the wards of the hospital, and also the university building adjoining. As we went along we passed Dr. Parkes, and on my telling him that he, Dr. Parkes, and Dr. Watson, were the men, of all in London, I had most desired to see, he introduced me to Dr. Parkes, whom I found to be a very fine looking and affable gentlemen. I took occasion to mention Dr. H. F. Campbell's report "*On the Nervous System in Febrile Disease,*" and said I would send him a copy if they would review it in one of the London Journals, which they promised to do. They gave me their cards and invited me to call. I found everything about this hospital in nice order. There are generally from 150 to 200 patients in the wards, and a large number of out-patients apply twice a week for advice and medicines.

Having, through the kindness of Dr. Odling, obtained a ticket to the *Royal Institution of Great Britain*, I went at 9 p. m. to hear a lecture by Mr. Faraday, one of the most distinguished philosphers of the day. When I applied, the secretary said he could not refuse me a ticket, but that I might congratulate myself on being an American, as there was hardly any other to whom he would grant the favor, and being the last lecture of the season, the house would be very full. I presume he was influenced somewhat by the fact that this great institution, the first of the kind in London, was founded in 1799 by a few men, among whom was our distinguished countryman, Count Rumford. It was here that Sir Humphrey Davy delivered his celebrated lectures, and announced his great discoveries in chemistry and electricity, which have immortalized his name and conferred honor on the institution. He was followed by Mr. W. T. Brande, and then came Mr. Faraday, who, full of years and honors, still charms and delights the distinguished audiences that always attend his lectures. On this occasion the lecture-room was crowded with the very *élite* of the city, among whom were many noblemen and ladies. The subject was *phosphorescent light.* Mr. Faraday is a very good looking man, with a profusion of gray hair, fine eyes and ruddy complexion. He is upward of sixty years of age, but quite active, and one of the most expert and successful experimenters I ever saw. He is very fluent, and speaks rapidly, as if anxious to communicate as much knowledge as possible in the time allowed. His experiments were beautiful, and he was listened to with profound attention. He lectured about an hour and a quarter, and I did indeed congratulate myself on having the happiness to see and hear so great a philosopher. This is a splendid institution, having a fine museum, and a select library of 30,000 volumes.

I here closed my observations for the day; went back to Morley's, jotted down my memoranda, and retired to rest pretty late.

ST. BARTHOLEMEW'S HOSPITAL.

June 18th.—I went to this ancient and celebrated institution about noon. This was the theatre of Mr. Abernethy's great deeds and quaint humor, and is decorated with a fine marble bust and portrait of him. St. Bartholemew's was founded in 1102, and is, I believe, the oldest of all the London hospitals. It receives within its walls nearly 6,000 in-patients annually, and its out-patients and casualities amount to nearly 90,000 annually. It contains 650 beds, of which 420 are allotted to surgical cases, and 230 to medical cases and the diseases of women. The museums of anatomy, materia medica, and botany are extensive, and open daily to students. The library contains upwards of 5,000 volumes of standard works, also the chief medical journals. A reading-room is open to students of the school, during the greater part of the day. Among the medical and surgical staff are some names well known in our country, as the venerable Sir Wm. Lawrence, Mr. Stanley, Mr. Skey, Mr. Paget, Dr. Burrows, Dr. West, and Dr. Farre. On entering, I was conducted to the room where Mr. Paget was prescribing for surgical out-patients. I sent

him my card, and he welcomed me cordially. He dispatched thirty or forty patients in a very short time, and then having a pressing engagement, he asked his assistant to conduct me to the operating-room and wards. It was operating day, and Mr. Stanley now drove up. He saluted me politely, and asked me to walk in and see what was to be done. Mr. S. is rather short and stout, with gray hair and a good face. Having learned from my conductor that there was very little to be done here to-day, I concluded to go at once to King's College Hospital, where there was a prospect of seeing a number of operations.

KING'S COLLEGE HOSPITAL.

When I arrived I found about a hundred spectators in the amphitheatre, and the distinguished surgeon, Mr. Ferguson, commenting on a case upon which he had just operated. Mr. Ferguson looks to be about fifty years of age, robust, well formed, rather bald, and a very cool, self-possessed air. He speaks very deliberately, and not without the disagreeable appearance of affectation. But he is as cool and deliberate in operating as he is in speaking. I witnessed the following:

Operation 1.—*Lithotrity* on an a man: third time. The patient was put profoundly under chloroform, and Mr. F. proceeded to extract about a dozen fragments of stone from the bladder. From the manner with which these rugged fragments were dragged through the urethra, I shall certainly not envy this patient the pleasure he will have in emptying his bladder for the next day or two. He was on the table nearly an hour.

Operation 2.—*Amputation of the thigh*.—This was a case of *ununited fracture*, which had resisted all the means resorted to for the purpose of producing bony union. Mr. Ferguson removed the limb with the knife alone, and then sawed off a considerable portion of the bone. After tying the arteries, he closed the stump with silk sutures, and it looked very neat. It was done under chloroform. After the operation was over, he drew from the lower fragment a long ivory peg that had been driven into the bone to cause reunion. Mr. F. did not mention any other means that had been resorted to in this case. I could not but suspect that this poor fellow had lost a leg for the want of skillful surgery.

Mr. Bowman now took the stand, and operated on a young woman for a deformity of the upper lip. It was very tedious, and her beauty was certainly not improved at the close of the operation, though it may be ultimately. Mr. B. is a tall, thin, handsome man, with an intellectual countenance, and apparently about forty. His remarks on the case were very interesting.

Mr Wood, assistant surgeon, now took the stand, and operated for the permanent cure of reducible hernia on a young man. He took occasion to condemn Wurtzer's operation, and then performed *his own*, which, from the little I saw and heard of it, I am unable to describe so as to make you understand.

Dr. Watson holds the honorary position of consulting physician to this hospital, but does not attend wards. Dr. Budd, his successor, is in service, but I have not had the pleasure of seeing him.

LONDON FEVER HOSPITAL.

June 23d.—This morning my ever kind friend, Dr. Browning, conducted me to this institution. Having seen very few cases of fever in any of the hospitals I have visited; I felt a strong desire to see one specially devoted to this class of disease, which, as you are aware, is the most important of all in our part of the world.

The London fever hospital is rather small, (only about 200 beds), situated in a high and airy place, and most admirably arranged for ventilation and cleanliness. The visiting physicians are Alexander Tweedie and Southwood Smith; assisting physicians, Wm. Jenner and C. Murchison; resident medical officer, Dr. J. D. Scurrah. The latter received us, and very politely conducted us through the entire establishment. Neither of the visiting physicians was present, which I regretted, as the name of Tweedie and Southwood Smith have long been familiar to us as writers on fever. They are now old men, and rather behind the new lights of the day.

Dr. Scurrah gave me the annual report for 1858, from which it appears there has been a marked decline in the prevalence of fever in the last year or two. Some other diseases besides fever, amounting to more than one-third of the whole, are admitted into this hospital. The admissions for fever last year were 357, viz: typhus 15, typhoid 180, febricula 44, scarlatina 118. Deaths from fever 59, viz: typhus 9, typhoid 28, scarlet 22. This shows a mortality from fevers of more than 16 per cent., which certainly does not reflect much credit upon the fever doctors of the great metropolis, especially when we consider that every possible convenience and advantage are here supplied. The only drawback is, that some of the cases are admittd in advanced stages of disease, a thing that occurs at all hospitals. The largest admissions occur in September; the smallest in February. Daily average throughout the year, thirty-eight.

The mortality from typhus fever was upward of 50 per cent., from typhoid 13.72 per cent., and of scarlet fever 19 per cent. Now I would ask whether any respectable practitioner of seven years' experience in any city, town or neighborhood, in our Southern country would ever boast of such success as this in the treatment of fever? Dr. Scurrah says they do not pretend to *cure* fevers at this hospital, but rather to guide them as safely as possible through their natural course. The treatment consists of wine, nourishing broths, sometimes camphor mixture, and astringents when there is diarrhœa.

It is evident that fevers at this day constitute but a small portion of the diseases requiring medical aid in London, so different from the state of things in the days of Sydenham. And this is unquestionably due to the wonderful improvement that has taken place in sanitary measures. In the three weeks I have spent in London, I have traversed it in almost every direction, and I must say it is the

cleanest city I ever saw. The only place I have seen that could be compared to even Common Street, our great thoroughfare, was around the great fish market of Billingsgate, and even this comparison would be decidedly in favor of the latter. London was once as sickly as New Orleans, but is now one of the healthiest cities in the world; and this is entirely due to her admirable sanitary measures. If our own ill-fated city would only follow her example, there is no telling what great benefits would accrue. I have obtained some valuable reports from the General Board of Health, which I shall bring home with me.

The hospitals named are all I have found time to visit during my sojourn in London, though there are five or six others of high standing. Nearly all of the great hospitals have medical schools attached, and afford fine facilities for instruction. In these schools studens are prepared for examination before the royal colleges of surgeons and physicians, which confer the highest degrees upon the successful candidates.

The amount of charity extended to the afflicted poor of London is almost beyond calculation, and reflects great honor upon the liberality of her wealthy citizens. All the great hospitals are free to the poor; but besides these there are eighty-eight free dispensaries, and other medical institutions of various kinds, devoted entirely to the relief of the poor. From the Medical Directory I learn that in only twenty-one of these institutions the average number of patients for a single year was upward of *one hundred and ninety thousand*. In a single one—the Metropolitan free hospital—the average number of patients was fifty thousand. Many other instances might be given of extraordinary charity and benevolence to the poor. It really appears to me that the poor of this great city are the favorite *pets* of the rich, who bestow on them every imaginable care and comfort.

But I find my letter is getting entirely too long, and lest I should weary the patience of yourself and readers, I will here conclude, with the promise to let you hear from me again, after I shall have visited some of the other seats of medical science in this part of the world. I start to Edinburgh to-morrow, thence to Dublin, and after that to Paris, where I shall probably write again.

I remain, very truly yours,

E. D. Fenner.

London, June 25, 1859.

[*N. O. Med. News and Hosp. Gaz.*

Mortality.

Life and Labor.—The Sanitary Review for January has an article on the influence of various common occupations on health and life. The effects of sand paper making are illustrated as giving rise in the young to a modified phthisis, which is sometimes rapidly fatal. Walking stick making and hemp and flax dressing are described as

exciting bronchitis and bronchorrœa. The Neapolitan hemp has also the peculiar property of producing a spasmodic paroxysmal attack like that produced by drying hay and by ipecachuana. Trimming manufacturers' work leads to bronchial mischief. Fur dyeing, by exposing the artisans to the fumes of nitrous acid and to the dust arising from dried sulphate of copper, specially leads to a number of serious evils, affecting the teeth, the digestion, and (worst of all) the organs of respiration. Cigar and snuff making, in the first instance, give rise to the peculiar toxical effects of tobacco, and afterwards to chest disorder, ending in chronic bronchial flux and inanition. The writer of this paper suggests that a parliamentary committee of enquiry should be organized to enquire into the subject of occupations and health. He concludes as follows:

"When we look at diseases as a whole, we stand amazed at the varieties of type which they assume. When we classify them into groups according to their causes, we stand equally amazed at finding to how very few groups all diseases may be reduced. We find all the disease causes out of the body and clothed in externals. Resolving the causes, there stand out some dozen poisons of communicable and reproductive power, improper dietary, variations of atmosphere, and occupations. Of all these, the last stands most invitingly for enquiry. The enquiry is of a kind to which the most rigid rules are applicable. Its results might be demonstrations, its suggested remedies simple certainties."—*Sanitary Review—Br. and For. Med. Chir. Rev.*

Mortality of England in 1856.—Of 390,506 deaths in the year, the causes were not specified at all in 4,666 cases, and 3,474 are simply tabulated as sudden deaths, all inquiries having failed to elicit further definite information. 94,407 of the whole number of deaths were those of infants under one year old.

The causes of death are arranged in a few classes with numerous subdivisions. 78,047 of the deaths are classified as zymotic diseases: typhus (15,398), scarlatina (14,160), and diarrhœa (13,815), proving fatal in 43,373 instances, or considerably more than one-half of the whole number due to this class. Hooping-cough, measles and croup stand next in order. Small-pox, formerly so fatal, was the cause of death in 2,277 cases.

Of the class of diseases denominated "constitutional," 82,856 persons died. Phthisis (consumption) stands sadly pre-eminent in this list, its victims numbering 48,950 persons, by far the greater proportion of whom were young women. "How many of the thousands of deaths are to be ascribed severally to the fatal stays and to the indoor life of women, etc., it is not easy to calculate. Air is the pabulum of life, and the effects of a tight cord round the neck, and of tight lacing round the waist, differ only in degree in the time of their manifestation and in some of their symptoms; for the strangulations are both fatal. To wear tight laced stays is, in many cases, to wither, to waste, and to die, and is perhaps the natural chastisement of the folly which inflicts this Chinese deformity,

natural only to wasps and other insects, on the human figure." The tubercular diseases carried off in all 63,832 persons.

The "local diseases," as inflammations, the allied pathological phenomena or their results, and functional diseases of particular organs, proved fatal to 149,911 persons. 50,535 of these died of diseases of the brain and nervous system, including also 23,946 deaths by convulsions. 13,672 deaths were referred to diseases of the organs of circulation. Diseases of the respiratory organs proved fatal to 52,908 persons, 21,528 of whom died from bronchitis, and 22,653 by pneumonia. These diseases, and all others of the class, were less fatal than in the previous year. 22,620 persons died frsm diseases of the digestive organs. The other causes of death under this heading are numerous, but the cases are few in each.—*Condensed from the Registrar General's Annual Report.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Practical Treatise on Enteric Fever—its Diagnosis and Treatment—being an analysis of one hundred and thirty consecutive cases derived from private practice, and embracing a partial history of the disease in Virginia. By JAMES E. REEVES, M.D. Philadelphia: J. B. Lippincott & Co., 1859. pp. 199.

We are told by the author that the volume before us is an enlarged account of the cases of *Enteric Fever* reported in 1856, for the Buffalo Medical Journal. He has been induced, by the suggestion of physicians, to give his observations this more permanent form. It is rather a new feature in Medical literature for a "country practitioner" to publish a book. Books emanate mostly from professors and those having the charge of hospitals.

We are not sure but that the example before us may prove profitable in several ways. Why may it not stir up the country physicians to a more thorough sense of their duty—to the propriety of making a record of important cases? Their own literary status would, by such a course, be increased, to say the least, while the professional stock could not fail to receive additions. Besides, what would contribute more than such a course to the interest of societies, that now too often flourish only during the time of forming constitutions, enacting by-laws, etc., etc.

If physicians who practice in the interior were more in the habit of placing their observations in a permanent form, we should soon have the material for a more perfect knowledge of epidemics and endemics. As the custom now is, our descriptions too often are only good for an epidemic as it has made its appearance in a city with a crowded population, or in hospitals where important modifying influences are always present. To comprehend, for example, typhoid fever, to see its essential pathological elements, we need just such descriptions as are found in the work before us, and it will only be when the physicians in every region where the disease has prevailed shall have given accurate accounts of it, that we will have any thing in our literature worth preserving. The disease, as it breaks out in rural districts, is a very different something from what it usually is in cities, hospitals, or ships. In rural districts, it is most likely to exhibit simply its own essential elements; in cities, hospitals, etc., it is usually complicated with the influences of some variety of "*crowd poison.*"

Following the example of Wood, the author denominates the disease "*Enteric Fever.*" In a previous No. of the Journal, when noticing the Treatise of Dickson, we called attention to the impropriety of this innovation. The disease, which it is the object of the volume before us to set forth, is not one simply of the alimentary canal, as the name preferred by Wood and Dickson would seem to indicate. It is made up of a series of lesions due to an *epidemic typhous* constitution which, according to medical historians, has prevailed over our country at different periods from Hudson's Bay to the Gulf of Mexico. The disease, to which the condition of the atmosphere has given rise, has received different names, according as one organ, or another, seemed to be affected. As a pestilential malignant epidemic, it had an existence in New England, along the Connecticut river, as early as March, 1806. It prevailed nearly at the same time in Massachusetts. From its symptoms we learn that its ruling tendency was that of *early prostration.* Patients were very soon in a stupefied state, and it was not uncommon for them to die in twenty-four, or forty-eight hours after the more grave symptoms were manifested. During the years of 1810, '11, '12, the disease spread west and south. We are told that it reached the banks of the Ohio in 1814. It had then, however, associated with it an additional pathological element. Besides the general tendency to prostration, there was pneumonia in many cases. This secured

for the disease the name of ***Pneumonia Typhoides.*** Until 1820 this "typhus atmospheric constitution" prevailed in very many localities throughout the west and south. Dr. Hildreth, of Marietta, O., and Dr. Huestis, of New Orleans, allude to it, and both speak of its influence on the autumnal fevers in their respective localities.

The years of 1821, '2, '3, will long be remembered by the inhabitants of the Mississippi valley, on account of the sickness that every where, from Canada to New Orleans, prevailed. The epidemic reached its highest degree of malignity in '22. Although this epidemic was *bilious* in character, it will nevertheless be seen, by those who are curious enough to look into its antecedents, that it was preceded by a tendency of cases, to assume the typhoid type. During also the prevalence of the epidemic, many cases passed at a very early period of the course into the typhoid stage.

Such facts go to show that what we now have in our country as continued fever, and to which we apply pretty generally the name "typhoid," is no new form of disease. We can indeed trace its recognition back to the first dawn of medical history. It has had many names in ancient, as well as modern times. Looked upon as "*idiopathic*" by certain physicians, it received names founded upon the presence of certain symptoms regarded as being constant; while regarded by others as being the effect of an inflammatory process of some organ or apparatus, it has received names expressive of that circumstance. From the constancy of prostration, and putrid adynamic tendencies, the disease had anciently applied to it the adjectives Low, (Hippocrates), Putrid, (Sanctorius), Putrid Malignant, (Riverius), Pestilential, (Sydenham), Malignant, (Bellini), Continued Putrid, (Boerhaave), Petechial, (Francastorius), Spotted, (Brooks), Typhus, (Cullen, Thomas, Armstrong). By those on the contrary who look upon the disease as *symptomatic*, it has been styled Brain fever, (Clutterbuck), Mucous fever, (Hildebrand), Gastro Enteritis, (Broussais), Mesenteric fever, (Baglivi), Typhoid Affection, (Louis).

From this brief review of the nomenclature of the disease, we can see how many and how various the attempts have been to fix upon a name. The writer before us may notice that each author named the disease according to what seemed to him at the time to be the leading feature. Hippocrates was impressed with the idea that the ruling tendency of the movements of the whole organism was *low*,

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below the normal standard, hence the name he adopted. Some modification of the idea of Hippocrates has obtained, to a greater or less extent, until the present time. There is scarcely, indeed, a writer of ancient or modern times, but what in his descriptions alludes to the fact that the vital properties of the organism are sooner or later, in the course of the complaint, *"stupefied."* This being so general a characteristic, it has secured permanently for the disease the name *typhus* or *typhoid.*

It may also be observed that the attempt by Wood and others, to name the disease from anatomical lesions is not new. It is as old as pathological anatomy. The wonder is, however, that these authors should have exhibited such a lack of judgment in calling the disease *"Enteric"* fever, the intestines being but the occasional seat of the disease.

The views expressed in the work before us on *treatment,* are in the general very judicious. If we were to find fault with them it would be because of "officiousness." Too great a variety of drugs are suggested as being useful. We are of the opinion that the disease, like small pox, will run a definite course in spite of any thing in the way of medication, and that it matters not what are the surrounding circumstances, or the physical powers of the patient, the tendency of the vital properties of the organism is downward; debility and stupefaction are always in the category of events, and require to be provided for. As a consequence, drugs addressed to these tendencies, or states, are indicated to the exclusion of everything else, except as mere palliatives.

The author suggests, without sufficient qualification, the utility of blood letting. We simply think the remedy contraindicated by the pathology. The same may be remarked of *veratrum viride.* Unless it can be shown to have some other effect than that of lessening the action of the heart, we regard it as not only unnecessary but injurious.

It is very much to be regretted that our knowledge of the therapeutics of typhoid fever continues to be so purely negative. We know something of palliatives, but nothing of any article capable at once of taking *"the bull by the horns."*

In conclusion, we express our mind with great pleasure that Dr. Reeves has acted well his part. His contribution to our literature of Fever is a very creditable one, and deserves imitation.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F. R. S. Lecturer on Anatomy at St. George's Hospital. The drawings by H. V. CARTER, M. D., late Demonstrator of Anatomy at St. George's Hospital. The Dissections jointly by the Author and Dr. Carter. Three hundred and sixty-three Engravings on Wood. Philadelphia: Blanchard & Lea, 1859. pp. 754 8vo.

It might seem that new works on anatomy were unnecessary. Why did not Vesalius, who has the credit of being the first European who cultivated the science, say all that was necessary on the subject? He doubtless told all he knew, and why not be satisfied? By some means or other a notion got out that the great father had not told all; that something was still lacking. This idea operated on Fallopius, Haller, Meckel, on the Hunters, on the Bells, on Bichat, on Wistar—not to mention others quite as much distinguished—and hence the many attempts to tell us all there is. The task, it seems, has not yet been performed. A great addition has been made to the stock collected by Vesalius; still the subject is far from being exhausted. There have been few observations of late entitled to the name of discoveries. No new bones have been found, but occasionally a new muscle, vessel, or tissue is pointed out. The microscope has informed us of the existence of such countless numbers of blood vessels and nerves that we have no expectation that an attempt will ever be made to extend nomenclature to them. A vessel, the caliber of which admits but a single corpuscle at a time, may not at present seem to our gross nature to be of sufficient importance to merit a name and a description. Still we cannot tell what new tastes progress may develop. The individual relations of these minute vessels to ultimate cells concerned in nutrition, secretion, etc., may with some future generation become a grave subject of investigation. The bringing forward, however, of new matter is not the only reason that might be assigned for the appearance of new books on Anatomy. Important improvements have been made in the method of teaching the subject, and it is here that the work before us claims notice.

The author has evidently devoted much time to osteology as the basis of anatomical knowledge, for he has taken great pains to give the most minute markings of each bone, and has indicated, by dot-

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ted lines, after Holden's plan, the attachment of muscles; the articulations are also shown on a new plan.

What more than anything else constitutes the leading feature of the work, is, the attempt to make it eminently practical. The author, as a consequence, has introduced much in the way of *Surgical* and *Regional* Anatomy. But this is not all. He has called attention to treatment: if a fractured bone, for example, the character of the displacement is given, and the most approved modes of remedying it. We insert the following as a specimen:

"Fracture of *the lower end of the radius* is usually called Colles fracture, from the name of the eminent Dublin surgeon, who accurately described it. It usually arises from the patient falling from a hight and alighting upon the hand, which receives the entire weight of the body. The fracture usually takes place from half an inch to an inch above the articular surface, if it occurs in the adult, but in the child before the age of sixteen, it is more frequently a separation of the epiphysis from the diaphysis. * * * This fracture may be distinguished from dislocation, by the deformity being removed on making sufficient extension, when crepitus may be occasionally detected; at the same time an extension being discontinued, the parts immediately resume their deformed appearance. The age of the patient will often assist in determining whether the injury is fracture or separation of epiphysis. The *treatment* consists in flexing the fore arm and making powerful extension from the wrist and elbow, depressing at the same time the radial side of the hand and retaining the parts in this position by well padded *pistol-shaped* splints."

Here we have descriptive and surgical anatomy and *treatment*, not only in the same book and chapter, but in the same paragraph.

We know that every work on *Descriptive* anatomy, is a work also on *Surgical* anatomy. The very description of an artery shows, at once, its relation to other parts, and hence may be inquired, the necessity for special works on surgical anatomy. All that we have to say in reply to such questions, is that we have always thought the best medical scholars were made by connecting *discription* with utility. If at the time a teacher is passing over the dry details of a bone, he does not even hint at the practical application of his remarks, he will receive but little attention from his class. We are all eminently utilitarian, and when a subject can be made to assume this aspect, attention is involuntary. The student likes to hear what

he can turn to practical account, and our notion agrees with that of the author, that throwing in a remark now and then on the *uses* of the information we are communicating, "*pays*" in a number of ways.

Besides what is found in the text on Surgical Anatomy, a number of pages in the back part of the volume is exclusively devoted to Surgical Anatomy of Inguinal Hernia, of Femoral Hernia; Surgical Anatomy of Perineum and Ischio-rectal Region, etc., etc.

Taken all together, we look upon this work as being well calculated to cultivate a taste for the subject of which it treats. Unless a student becomes interested in Anatomy at the commencement of his career, he will most likely be a smatterer through life; and hence, a work like the one before us, that presents us with an improved method of teaching the subject, is a desideratum.

In concluding our notice of this work, we embrace the opportunity to remind the student that books and pictures on Anatomy are of secondary importance. A good knowledge of the subject can only be obtained by dissections, unfolding the leaves of a *cadaver*.

A Treatise on Gonorrhœa and Syphilis. By SILAS DURKEE, M.D., Boston: John P. Jewett & Co.

In the preface the author states as follows: "In the year 1854 the author of the following pages prepared an essay on 'The Constitutional Treatment of Syphilis,' which was honored by the award of a premium from the Boylston Prize Committee of Harvard University. That essay constitutes a large portion of the present volume; and though it has been modified to a degree that deprives it of its original identity, it is believed that its intrinsic merits have been materially enhanced."

Other duties forbid our giving this book more than a mere notice. It is a very fairly executed octavo of 442 pages, bound in cloth. The style is chaste and pleasing. So far as we have been able to peruse it, it contains abundant indications of diligence, experience and sound sense on the part of its author. The scope of the work is such as to make it quite complete. It is characterized by an obvious effort to avoid abstruse and theoretical points; the resources of the author being spent, as should be the case, in making full array of the facts bearing upon questions admitting of something like definite settlement. The work is accordingly, well adapted to the

wants of the great body of the profession, who though so situated, in reference to the diseases of which it treats, as to be obliged to treat them, and give professional opinions in reference to them, can, notwithstanding, hardly be expected to have more than limited experience, and consequently, are scarcely supposed to be interested in the unsettled and theoretical features of the subject.

Furthermore, as indicated in the quotation which we have made from the preface, this treatise is essentially a prize essay. Just think of it! A prize, perhaps of $100 is offered, and responded to with the book before us: a book in every way, and to all concerned, highly creditable.

We are gratified to note that this offering of prizes for meritorious essays is becoming quite prevalent. We are not acquainted with the arrangement under which this prize was awarded; but have satisfactory indication before us, that it was worthily bestowed. The Massachusetts State Medical Society, that of Connecticut, and the National Medical Association, have made provision for the annual distribution of prizes. The Illinois and Ohio State Societies have bestowed prizes in a few instances; and the latter now has a committee entrusted with the duty of preparing a plan for doing it annually. This is a step in the right direction. H.

The Science and Art of Surgery; being a Treatise on Surgical Injuries, Diseases and Operations. By JNO. ERICHSEN, Prof. of Surgery and Clinical Surgery in University College, and Surgeon to University College Hospital. An improved American edition from the second enlarged and carefully revised London edition. Illustrated by four hundred and seventeen engravings on wood. 8 vo. pp. 996. Philadelphia: Blanchard & Lea. (For sale by Riley & Co.)

It is only necessary to announce a *new edition* of this work. It seems to have taken a place in the libraries of most of the physicians throughout the country. While it makes no pretensions at giving the history of surgical science, or noting the successive steps by which the science has reached its present useful condition, it nevertheless presents a very practical outline of what is known at the present day, it having been the object of the author to make the work a guide to the practitioner, as well as a text book to the student.

In order to bring the work fully up to the times, the author has revised the present edition very carefully, and has also re-written some chapters.

Woman: Her Diseases and Remedies; A series of letters to his Class. By CHARLES D. MEIGS, M.D., Professor of Obstetrics, and the Diseases of Women and Children, in the Jefferson Medical College, Philadelphia. Fourth edition, revised and enlarged. Blanchard & Lea, 1859.

This work, on the appearance, from time to time, of its several editions, has already been sufficiently brought to the attention of our readers. This early appearance of its fourth edition, is, of course, a re-indorsement of it—the best any work can have.

The execution of the present edition corresponds very closely with former ones, and is such as will fully sustain the high reputation of the house from which it emanates. H.

Physicians' Visiting List for 1860.

We are in receipt, from the publishers, Lindsay & Blakiston, Philadelphia, of this little pocket volume, "The Physicians Visiting List, Diary, and Book of Engagements." The contents embrace, almanac, table of signs, Marshall Hall's ready method in asphyxia, poisons and their antidotes, table for calculating the periods of utero-gestation, and blank leaves for visiting list, memoranda, etc., etc. For sale at our book stores.

The Physician's Hand-Book of Practice for 1860. By WM. ELMER, M.D., and LOUIS ELLSBURGH, M.D. New York. W. A. Townsend, Publisher.

This is an enlargement on the Physician's Visiting List, as the caption above quoted indicates. As far as we have looked through the notes and suggestions relating to what the physician encounters in his daily round of practice, they are judicious. (For sale at our book stores.)

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

MAL-PRACTICE.—We have been consulted lately in regard to a number of cases of alleged mal-practice. And were we to judge from the instances which have come to our knowledge, we should think the tendency to call in question the conduct of surgeons is on the increase. This certainly has not originated from the success connected with these prosecutions. In not one instance in twenty—as far as our observation extends—have they been successful. This is due to the circumstance that deformities, when they do occur, are, pretty constantly a *necessity, or the fault of the patient.* When the storm partly breaks off a sapling of the forest, although it may be straightened up, all the wisdom of the world is inadequate to the prevention of deformity and unnatural weakness Why, then, in the treatment of broken bones, etc., should surgeons be held responsible for "*perfect*" results? In all candor, we ask why?

Observation has convinced us that very much of what the physician or surgeon is blamed for, is due to the recklessness or want of obedience on the part of the patient or friends. The surgeon may do his duty—may do all that the best skill is capable of; but if he has not the cordial and faithful co-operation of the patient and nurse, he will be thwarted in his objects. This will be especially the case, should the patient reside at a distance.

As a consequence there is scarcely ever any merit in the cases of prosecution for mal-practice. The Judiciary is beginning to understand this, and hence the frequency with which the attempts to rob members of the profession fail.

If we were to call the attention of the profession to any thing having the appearance of error in it, it would be to the amount of attention usually given to surgical cases. As a general remark, this is not enough. We are all of us too much in the habit of making our visits at intervals that are too long apart. At the first visit, if it is a fracture, for example, the bones are adjusted and the dressing applied. Two or three days, and often a week, is allowed to pass without again seeing the patient. Or, per-

haps, directions are left, that if any thing uncommon occurs, the physician must have word. All this is wrong. A patient with even a simple fracture should be visited every day until the union of the bones has been completed. Better err on the side of giving too much, than too little attention.

THE WHITNEY CASE AGAIN.—Our readers will recall to mind the case of Whitney, of New York, treated with the probang, by Dr. Green, of probang notoriety. They will also recollect that Drs. Mott and Beales charged Dr. Green with mal-practice, and how the charges were discussed in the New York Academy of Medicine.

Dr. Green acquitted himself very fully before the Academy, and before the profession of the country. He, however, to have the charges made against him more thoroughly investigated, has forwarded the papers connected with the case to Bennet of Edinburgh, and Rokitansky of Vienna. Letters have been received from both of these gentlemen. Any one who reads these letters will not envy the connection which Mott and Beales have with the case. A thorough exposure, however, is just what these gentlemen richly merited. They acted from unworthy motives when they accused Dr. Green with having caused the death of Whitney. The reproof, therefore, contained in the letters alluded to, is, to our mind, in good taste.

We may as well also state, in this connection, that we are very far from indorsing the general use Dr. Green has made of the probang. It was a hobby with which he was intoxicated. He knew, doubtless as well as any one, "*how*," but not "*when*" to use the instrument.

STARLING MEDICAL COLLEGE.—The Thirteenth Session of Starling Medical College has just been commenced. More students—one-third more—are in attendance now than at a corresponding period for several years past.

The Institution may now be presented to its alumni and many warm friends, with new claims for consideration. Since our las session, we have added many fine things to our museum, fro France and Germany. These things embrace models in *wax* an

paste, of diseases of the eye, ear, and genital apparatus; a number of preparations showing the normal structure of the eye, ear, brain, vascular system, absorbent system, etc., etc. Besides, we have added largely to our osteological department. We have the Beauchene preparations of the head, face, foot, and hand; and also quite a number of skeletons of inferior animals, including specimens of all the vertebrata.

The Hospital arrangements are now very complete. The Penitentiary and County Infirmary furnish, indeed, as much material for clinical instruction as can be profitably used.

It is the design of the Faculty to keep the College in motion during the most of the year. A Spring Course will therefore be commenced about the 1st of April, and continue until the 1st of July. Students who are ambitious to make the most of themselves, will find it very much to their advantage to attend this course.

Books Received.—We have just received Habershon on the Alimentary Canal; Parrish's Practical Pharmacy; Flint on Diseases of the Heart; Bird on Urinary Deposits. These works, several of which are new, will be more formally noticed in the future.

Cleveland Medical Gazette.—We are in the receipt regularly of this journal, and it gives us great pleasure to state that it is in every way worthy of liberal patronage. Prof. Weber's ring is about right; and we heartily wish his enterprise success. He has now, as we see in the number before us, associated with him Alleyne Maynard, M.D., as assistant editor.

Prof. L. P. Yandell, so long connected with the schools of Lexington and Louisville, has removed to Memphis, Tennessee, where he takes the chair of Theory and Practice. Dr. Y. commenced his professorial career in the chair of Chemistry, at Lexington, Ky. He continued to teach this branch during his stay at that place, and for

a number of years after his removal to Louisville. He was afterwards transferred to the department of Materia Medica.

What Prof. Y. undertakes to do, he does well; and nothing could be more appropriate than that his gifts and learning, at this period of his life, should be brought to bear on the most difficult of all the departments of medical science. Indeed, the new school with which Prof. Y. has connected himself, may congratulate itself that it could not have placed its helm in more able hands.

Dr. Hamilton's Surgical Clinic at Starling Medical College.
Reported by P. A. WILLIS, Med. Student.

SATURDAY, Oct. 23.—*Sarcocele*—The patient was a man aged 25 years, apparently of good general health. Eighteen months previously the disease appeared with enlargement and insensibility of the left testicle. Its growth was steady, involving the entire organ. It was now of very large size, distending the scrotum, pushing the right testicle, which was much atrophied, up to the abdominal ring.

The case was diagnosed as probably simple sarcocele. Prof. H. declined to undertake any treatment other than to extirpate the diseased organ. This was accordingly done by a free incision from the external abdominal ring over the spermatic cord and testicle. After the latter part was dissected out, on account of the very short condition of the cord, it was transfixed with a needle armed with a ligature. The cord was thus controlled till the ligatures, three in number, were applied. The dressings were completed with three or four interrupted sutures in the upper part of the wound—wet lint, and suspensory bag.

On the third day the patient spent some time in riding; on the seventh day he left for his home in a distant part of the State, feeling "that at least twenty years were added to his life."

The testicle was near a pound in weight. It had been tapped several times recently, from the supposition of its being a hydrocele. One of these tappings was attended, at once, with such obvious and permanent increase of its size, as to lead to the supposition that hemorrhage was produced in the interior of the organ. In the centre of the testicle, accordingly, a coagulum was found, near the size of the yolk of a hen's egg. The testicle was thoroughly disorganized,

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not containing a vestige of its original structure, interior to the tunica vaginalis.

Prolapsus Ani.—The patient was a very strong healthy child, aged three years. No obvious cause for the disease could be detected, except what appeared to be a relaxed condition of the parts about the anus.

Fer. Sulph. ʒi.
Water Oij.
Fiat solution.

Inject an ounce into the anus twice per day. Cleanse the parts with cold water after each stool, and use a slight sitz-bath to the parts as often.

Remarkable case of Absence of Pectoralis Major and Minor of the left side.—This was in a boy aged seven years. The ribs below the clavicle were only covered by integument, and seemed to be remarkably slender and frail, and the left side of the sternum also correspondingly imperfect. These muscles as well as the ribs and sternum of the right side, were remarkably well developed.

Morbus Coxarias.—The patient was convalescing, so much so as to be about. Although this boy had had several relapses, evidently on account of the difficulty of restraining him, and finally suppuration, persisting for many months, he is now recovered so far as to get about with only slightly restricted motion at the hip joint. Continued moderate exercise in the open air was directed, and an intimation given that, unless motion was quite perfectly restored, within a reasonable time, that forcible extension would be resorted to.

Fractured Ulna.—This fracture was from the application of direct violence, resulting in great swelling of the parts about the elbow joint. Special attention was called to the necessity of using splints wider than the forearm, and of adapting the padding &c., to the condition of the arm growing out of the manner of occurrence of the injury. Patient suffered very severe pains at night, on account of which directions were given to dispense with the splints, as far as possible, and use freely the following liniment:

℞. Chloroform.
Sweet oil ā ā ʒi.
Pul. camphor ʒii. Mix.

Wednesday Morning, Oct. 26.—Hospital of Ohio Penitentiary. *Dislocation of Clavicle* at outer extremity. Prof. H. stated that he had resorted to several recognized appliances for the purpose of

maintaining reduction in this case, without success. He finally hit upon a combination of appliances which accomplished the indications perfectly, as follows:

Taking a piece of cloth 20 inches wide, and two yards or more long, it was torn into a bandage with four equal tails, and a body of four inches. (Chisholm's bandage.) The body, resting on the point of the elbow flexed to a right angle, one-half the bandage rests upon the lower part of the humerus, passes horrizontally around the body, ascends as it passes back, so as to cross on the shoulder of the side from which it started, where it is kept well spread out, free from wrinkles, and abundantly stitched; the part of bandage corresponding to the fore arm is passed over the well shoulder, and secured first, however. This being done, a common roller bandage is run from the forearm just at the elbow over the end of the dislocated clavicle, and being returned a few times to give it the requisite firmness and strength, it, in its turn, is to be stitched down carefully to the bandage beneath. This gives a dressing which the patient cannot possibly displace, and which answers the indication perfectly.

Hemorrhoids.—Two cases were presented for operation, one of which was deferred. The ordinary operation of transfixing with a needle, ligating in two lateral halves, and returning the mass with a suppository of opium, was performed. On the fourth day after the operation the mass was thoroughly sphacelated, the bowels had acted, and the patient was disposed to go to work.

Dislocation of Femur.—This was of 10 years of standing. The patient was stripped below the waist, and placed upon a stool. The head of the femur was on the dorsum of the illiium, without either inversion or eversion of the toes.

The shortening was apparently three inches. Careful measurement, however, from the anterior superior spinous process of the illium, on the two sides, to the level of the trocanter major, and the external malleoli of corresponding sides, rendered it evident that the actual shortening was only about an inch.

By the use of a common square, one leg of which was carefully directed in the axis of the body, it was shown that the level of the anterior superior spinous process, on the injured side, was full an inch and a half above a horizontal line passing through that of the other side.

Prof. H. instituted an inquiry as to the cause of this elevation of

one side of the pelvis, while the shortening was really such as to call for a depressed condition of that side.

He stated that a similar state of things was frequently found in connection with certain conditions of this articulation, the later effects and incidents of morbus coxarias. That he supposed it resulted from a shortening between the fused points, to which, on the injured side, the muscles, especially the gluteal, were attached; and by which the pelvis was kept balanced with the true crest of the illium at a certain level. This distance being diminished on one side, in other words, these muscles being relaxed, are no longer in antagonism with the corresponding muscles of the other side, and hence these muscles undergo shortening, and depress the corresponding side of the pelvis to such degree as may be necessary to restore the antagonism.

The crippled leg was 4 inches less in circumference than the other. The patient stated that eight weeks after the dislocation he was able to do any common manual labor, and so continued.

The case was, of course, not presented with any view to an attempt at reduction.

Numerous other interesting cases were presented, which we forbear to present.

College Clinic, Saturday, Oct. 29. *Fistula in Ano.*—An apparently healthy man, aged 22, from Union county, presented himself. Four months previously a rather painful state of the parts about the left illeo-rectal region, was subjected, accidentally, to a moderate application of force, which caused rupture, and the discharge of a small quantity of pus. This never closed. Two months since, the patient, from an exposure, contracted a cough, which was once, by the same means, subjected to aggravation, in connection with which there was slight expectoration of streaks of "dark colored" blood. Pulse 100 per minute; respirations 24. Beneath the right clavicle there was obvious dulness on percussion; more or less of bronchial respiration, and distinct vocal fremitus.

Prof. H. had but little doubt but that these symptoms originated in tuberculosis.

On examination the fistula proved to be a complete one, with its external orifice about two-thirds of an inch from anal margin, and the internal one just at the upper margin of the sphincter.

The question of an operation was discussed. Prof. H. advised

that it should be performed; detailing cases in which, in his opinion, anal fistula produced serious impairment of general health, such as is eminently favorable to the production of tuberculosis. One case, that of a physician of his acquaintance, whose health was despaired of, on account of presumed tuberculosis, and an anal fistula. After some hesitation the fistula was operated on, and resulted in restoration to an excellent state of health. As the patient was not prepared for an operation at the time, he was advised as follows:

℞. Ol. Jecorus Acelli Oj.

S. Take a large table spoonful, at each meal, with twice that quantity of good rye whisky, and a liberal animal diet.

℞. Syr. Squill,
Cam. Tinc. Opii ā ā ʒii.
Iodide Potassium, ʒiss.

M. S. Take a teaspoonful as often as the cough may require palliation.

℞. Tinc. Iodine, 2 oz.

S. Let this be painted freely on the subclavicular region of the right side, as frequently as the sensibilities of the patient will allow.

Nævus.—Two beautiful cases were presented, only one of which was subjected to operation, for the want of time. Patient was only three months old. The disease appeared after birth, was on the left parietal bone, and was growing so rapidly, that it was thought best not to postpone the operation. The tumor was of some size, its greatest diameter being about 16 lines.

Chloroform was given, and acted delightfully. The tumor was then ligated, doubly loaded nævus needles being carried under the base of the tumor, the intervening scalp carefully divided at a moderate distance from the tumor, contiguous ones tied, and finally the whole tightened, to the utmost degree, and the mass strangulated, in tyeing the last pair.

Notes on some of the Chemical Reactions of Brucia. By T. G. Wormley, M. D.

In the following experiments, pure crystallized brucia was dissolved in pure water, when necessary, by the aid of just sufficient acetic acid. No deduction was made for the water of crystallization in the alkaloid. A small drop of a saturated solution of the reagent was applied to a grain of the brucia solution, placed on a glass slide.

The amount of brucia operated upon will frequently be stated in the form of a fraction, it being understood to imply the fractional part of a grain of brucia, in one grain of water.

1. Potash.

1. $\frac{1}{1000}$th, grain of brucia, gives, with a solution of potash, an immediate white amorphous precipitate, which very soon becomes a crystalline mass. The ppt. is readily soluble in acetic acid, and in deficiency of the reagent, but not readily soluble in large excess.

2. $\frac{1}{2000}$th, gives an immediate cloudiness, which is soon crystalline, but not abundant. The ppt. is increased by rubbing the drop with a glass rod.

2. Ammonia.

1. $\frac{1}{1000}$th, gives no immediate ppt., but very soon crystals begin to form, which in a few minutes are very abundant. If the solution be rubbed, granules and crystals appear immediately. The ppt. is prevented by large excess of ammonia, but when formed, it is not readily dissolved by excess.

2. $\frac{1}{2000}$th, by rubbing a few minutes, granules and crystals appear.

3. Sulphocyanide of Potassium.

1. $\frac{1}{1000}$th, in a few seconds crystalline tufts begin to form, which are not readily soluble in acetic acid.

2. $\frac{1}{3000}$th, no indication after 15 minutes.

4. Iodide of Potassium.

1. $\frac{1}{1000}$th, almost immediately rough crystals begin to form, and in a short time there is a good deposit of tabular plates.

2. $\frac{1}{2000}$th, no indication after rubbing several minutes.

5. Chromate of Potash.

1. $\frac{1}{1000}$th, gives an immediate yellow amorphous ppt., which very soon becomes groups of aciculated crystals, insoluble in acetic acid.

2. $\frac{1}{10000}$th, by rubbing a few minutes, there is a very good crystalline ppt. If excess of the reagent is used, there will be no ppt.

3. $\frac{1}{20000}$th, after rubbing several minutes, there will be a slight amorphous cloudiness, but no crystals.

6. Bichromate of Potash.

1. $\frac{1}{1000}$th, same as with chromate of potash.

2. $\frac{1}{10000}$th, by rubbing, immediate rings of crystals.

3. $\frac{1}{10000}$th, in several minutes, a distinct amorphous ppt., which after some time becomes crystalline needles.

7. Tannic Acid.

1. $\frac{1}{1000}$th, an immediate copious, dirty white amorphous ppt. which is soluble in a few drops of acetic acid.

2. $\frac{1}{10000}$th, much the same as 1.

3. $\frac{1}{100000}$th, immediately obvious, in a few minutes it is very satisfactory. The ppt. is somewhat bluish.

4. $\frac{1}{200000}$th, in a few seconds, a bluish ppt. is obvious, which soon becomes quite good.

5. $\frac{1}{400000}$th, in a little time the ppt. is perceptible.

8. Carbazotic Acid.

1. $\frac{1}{1000}$th, gives an immediate copious greenish yellow amorphous ppt., which after standing some time, becomes crystalline. The ppt. is not easily dissolved by large excess of acetic acid.

2. $\frac{1}{16000}$th, an immediate yellowish green amorphous ppt.

3. $\frac{1}{32000}$th, in a few seconds a green ppt., which is increased by rubbing.

4. $\frac{1}{100000}$th, after several minutes the ppt. is just perceptible.

9. Terchloride of Gold.

1. $\frac{1}{1000}$th, an immediate yellow amorphous ppt., which soon becomes flesh colored.

2. $\frac{1}{10000}$th, a greenish yellow ppt, soon becomes yellow; upon the addition of a few drops of a potash solution, the ppt. dissolves and gives a clear solution, with a slight dark ppt.

3. $\frac{1}{100000}$th, much the same as 2.

4. $\frac{1}{200000}$th, the ppt. begins in less than a minute, and soon is quite satisfactory.

5. $\frac{1}{400000}$th, the ppt. is obvious, but not satisfactory after several minutes. All the above precipitates remain amorphous.

10. Bichloride of Platinum.

1. $\frac{1}{1000}$th, gives a light yellow amorphous ppt., which almost immediately becomes small aciculated crystals; in this it differs from strychnia. The ppt. is insoluble in acetic acid.

2. $\frac{1}{10000}$th, an immediate crystalline ppt.

3. $\frac{1}{32000}$th, very soon crystals appear; they are increased by rubbing.

4. $\frac{1}{10000}$th, by rubbing, crystalline rings are immediately produced.

5. $\frac{1}{20000}$th, in a few minutes, prismatic crystals are seen, with the microscope they are rather abundant.

6. $\frac{1}{40000}$th, not satisfactory after several minutes.

Chloride of palladium gives the same results as the above reagent.

11. Ferricyanide of Potassium.

1. $\frac{1}{1000}$th, gives an immediate light yellow amorphous ppt., which soon becomes beautiful rosettes, plates, and stella. These are the most beautiful polariscope objects that we have seen, often showing colors without either polarizer or analyzer. These crystals are very characteristic.

2. $\frac{1}{3000}$th, by rubbing, very soon an abundant granular ppt.

3. $\frac{1}{10000}$th, after some time, a slight cloudiness.

Ferrocyanide of potassium gives no ppt. in a $\frac{1}{1000}$th solution.

12. Bromine in Bromohydric Acid.

1. $\frac{1}{1000}$th, copious brown amorphous ppt., which soon changes to yellow, and will dissolve if sufficient reagent has not been added. Soluble in excess of acetic acid and potash.

2. $\frac{1}{10000}$th, much the same as 1.

3. $\frac{1}{100000}$th, a greenish yellow amorphous ppt., which after a little time dissolves, and is not reprecipitated upon the addition of reagent.

4. $\frac{1}{200000}$th, greenish yellow, soon dissolves.

13. Iodine in Iodide of Potassium.

1. $\frac{1}{1000}$th, copious orange brown amorphous ppt., insoluble in acetic acid, but dissolves in several drops of potash solution, with the production of a dirty white ppt.

2. $\frac{1}{10000}$th, much the same as 1.

3. $\frac{1}{100000}$th, brownish ppt., soluble in a drop of potash solution, without the production of a white ppt.

4. $\frac{1}{300000}$th, a greenish yellow ppt.

5. $\frac{1}{1000000}$th, a very distinct, dirty yellow cloudiness. It is best observed by placing a drop of the reagent by the side of the brucia solution, and allowing the drops to flow together.

6. $\frac{1}{3000000}$th, the cloudiness is still perceptible.

14. Sulphuric Acid and Nitrate of Potash.

1. $\frac{1}{100}$th, if the drop of brucia solution be evaporated to dryness

in a steam bath, and the residue be touched with a small drop of concentrated sulphuric acid, it will immediately become rose red, and give a solution of much the same color; if now, a small crystal of nitrate of potash be added, the solution immediately changes to a fine orange red.

2. $\frac{1}{1000}$th, upon the application of sulphuric acid, the residue becomes a very fair rose red, but the solution is faint; the addition of the nitre gives a fine orange.

3. $\frac{1}{10000}$th, the acid gives a faint red, and the nitre, an orange, which soon becomes yellow.

4. $\frac{1}{50000}$th, the acid solution has a faint red color, which is best seen over white paper; the addition of nitre changes it to yellow. If a small crystal of nitre be moistened with sulphuric acid, and then dragged over the deposit, the crystal becomes orange, and gives a solution of the same color.

5. $\frac{1}{50000}$th, if the nitre, moistened by the acid, be placed upon the deposit, the crystal immediately becomes quite red, and when pushed over the deposit, leaves a red track.

We may thus, by the above means, apply two very characteristic tests to the same deposit.

15. Nitric Acid and Chloride of Tin.

1. $\frac{1}{100}$th grain pure brucia, if touched with a small drop of nitric acid, becomes a fine bright red, and gives a solution of the same color, which upon the application of heat is changed to yellow-red; if, after the solution has become cold, a drop or two of solution of chloride of tin be added, it immediately assumes a beautiful purple. The color is destroyed by excess of nitric acid.

2. $\frac{1}{1000}$th, the acid gives a fine red, which soon becomes yellow-red, and when heated, is changed to yellow. The tin solution gives a beautiful lilac color.

3. $\frac{1}{10000}$th, with the deposit, the acid gives a very good red, and the solution is faintly red; if after heating, the proper quantity of tin solution be added, it gives a perceptible lilac, but it is necessary that the quantities of acid and tin be well apportioned, otherwise the latter will give no indications. This is about its limit.

4. $\frac{1}{50000}$th, if the brucia solution be evaporated to dryness in a watch glass, and while warm, a very small drop of nitric acid be placed in the centre of the deposit, the margin will soon become perceptibly red; if then the deposit be dissolved in the acid, and

evaporated to dryness in a steam oven, it will leave a good red ring deposit.

5. $\frac{1}{100000}$th, when treated as in 4, the acid gives but little indication, but when it is evaporated, it gives a very fair red ring.

6. $\frac{1}{200000}$th, the acid gives no indication, but when evaporated, it leaves a deposit in the form of delicate red threads, which are best seen by placing them over a white surface.

As an appendix to the *color test* in the article Strychnia, in the September No. of this Journal. If $\frac{1}{100000}$th grain of strychnia be treated with a very small quantity of concentrated sulphuric acid, and the amount of bichromate of potash be well adjusted, it will give perfectly satisfactory results; the deposit containing very many visible points, any of which would be characteristic. These results were obtained from the deposits of several different solutions of strychnia. It is but right to state, that to be successful, it requires a very nice balancing of the materials concerned.

Columbus, Ohio, Nov. 1st, 1859.

[Fom the Cincinnati Lancet and Observer.

Likes and Dislikes.

Boston, September 7, 1859.

Messrs. Editors—It is always pleasing to the lover of art to gaze upon a landscape scene where nature herself seems almost outrivaled by the hand of the artist. Still, if viewed with a "critic's eye," some discrepances may possibly be noticed; while to the casual observer all is beauty and harmony of proportion.

So it is in taking a retrospect of the medical profession. The picture is fair to look upon. It presents a class of gentlemen, with noble and generous impulses, ever ready to respond to the call of suffering from whatever source it comes—consecrating their time and best energies to the relief of those around them. But, while contemplating this scene, certain *likes* and *dislikes* appear in the distant view; and in speaking of which I would do it in no "fault-finding spirit," or accuse any medical gentleman of being guilty of any discourteous acts in his intercourse with his brother associates, or otherwise; but simply look over the canvass and notice some of the defects, as well as the excellencies of the picture presented; and if,

in the opinion of others, no such exigencies ever arise, then shall we experience—

"The soul's calm sunshine and the heartfelt joy."

1. I dislike to see physicians at enmity with each other: it cultivates a spirit of jealousy and hatred, and serves to create and perpetuate a hostile feeling among their clients.

2. I dislike to hear a physician speaking ill of his professional brother, or insinuating evil against him, whether in the sick-room, among medical men, or the people at large: it indicates that he wishes to elevate himself at the expense of another's downfall, regardless of merit or character.

3. I dislike to see a regular physician consult with a Homœopathist, Eclectic, Botanic, or any other pretender outside the legitimate practice: it shows that the *love* for the *consulting-fee* is stronger than that of an *honorable* reputation.

4. I dislike to see a physician call a consultation for the *sole* purpose of casting a portion of the responsibility of the case upon another, for fear his reputation may suffer if his patient succumbs: it exhibits a want of fortitude and ability when they are most needed.

5. I dislike to see the consulting physician *magnify* the case under consideration beyond what it really is, or make any *extraordinary* display, in the presence of the friends of the patient, of his diagnosticating powers; or intimate by word, look, or knowing expression, *that all is not right:* it seems to say to those interested, that the true nature of the disease has never been detected till now; that his visit is most opportune, just in season to *save* the patient.

6. I dislike to see the consulting physician retailing in the shops, streets, or "where people do congregate," that he has just been called to the sick bed of this or that person, by this or that doctor; that he has so many consultations a day or week, and that he *always* arrives when the danger is most imminent, and the treatment incompetent: it cultivates a love for untruthfulness, and endangers him in becoming egotistical and a disseminator of news.

7. I dislike to see a consulting physician demand a change in the prescriptions, without sufficient reasons for so doing: it looks as if he wished to create an outside influence that something *more needed* to be done; when, in truth, the patient is doing well, or is beyond medical skill.

8. I dislike to see the consulting physician, while at the bedside, concur fully with the attendant, in etiology, diagnosis, prognosis,

and treatment; and then turn away and disseminate his reflections, and speak of unscientific therapeutics, etc.: it has the appearance of wearing *two faces*—the one serene and majestic, the other deceitful and hypocritical.

9. I dislike to see two physicians, when an hour is named to see a patient, disappoint each other, by the non-appearance of one or both, at the time selected: it shows that *punctuality* is yet to be learned, and that much valuable time is lost by negligence.

10. I dislike to see a tacit understanding between physicians, to call each other alternately in consultation: it savors too much of the common idea, "you tickle me and i'll tickle you."

11. I dislike to see the consulting physician, when there is some apparent dissatisfaction towards the regular attendant, resort to any *means dishonorable* to increase that *want* of confidence: it gives evidence that he would like to secure the patient, and more deeply wound the feelings of his medical brother.

12. I dislike to see a physician, when called suddenly to a patient, in the absence of the "family doctor," use the occasion to retain the family to himself, by extolling his success in the treatment of *just such cases* as the one before him, and that he has a remedy peculiarly adapted to the disease, which he wishes to try, and asks for a continuance of attendance: it certainly infringes upon the golden rule, "Whatsoever ye would that men should do to you," etc.

13. I dislike to see a physician, where called into the family of another, in his absence, remind the afflicted friends, with more than *ordinary* zeal, that his hours at home for medical advice are so and so, that his wife and family would be happy to solicit their friendship, and that, as a future reference, he would kindly tender a few of his cards, etc.: it seems like adroitly throwing the *bait* for a *bite*.

14. I dislike to see physicians *undercharging* each other: it looks like tampering to the avarice of their clients, and graduating their bids for practice to the amount of *available skill* on hand.

15. I dislike to see a physician, when called while the attending one is absent, demand less per visit than the latter: it evidently shows an effort on his part to buy the patient at some future time.

16. I dislike to see the elder physician, of forty or fifty years of experience, or even of lesser years, with an established reputation, and a competency, treat with disrespect, and neglect, the younger members of the profession, who are endeavoring to gain an honest livelihood in an honorable calling: it savors of jealousy and cupidity.

17. I dislike to see physicians give gratuitous service for the sake of practice, to those abundantly able to compensate them: it operates disadvantageously to practitioners dependent upon their labors for support.

18. I dislike to see medical men *negligent* and *timid* in presenting their bills: it cultivates the same *negligence* and *apathy* among their patrons, and evinces a fear that they may lose a family now and then by demanding their honest dues.

19. I dislike to see physicians revealing professional secrets between them and their patients: it argues a betrayal of confidence, and shows a want of integrity.

20. I dislike to see physicians reporting their *successful* cases of cure, and suppressing the *unsuccessful:* it furnishes unreliable statistics, and makes the reporter appear a little too ostentatious.

21. I dislike to see physicians making, vending, using or in any way giving countenance to "secret remedies:" it is sacrificing every principle of right, honor, and liberality for selfish and mercenary purposes.

22. I dislike to see a physician, when he enters the sick room, wear a physiognomy "as long as the moral law," or put on an air of cold formality: it sometimes leaves behind a depressing and unfavorable influence upon the minds of the patient and attendant.

23. I dislike also to see *too much* levity in the sick room: it may lead the occupants to think that the doctor depends more upon the exercise of the facial muscles, than the intellect, in his therapeutics.

24. I dislike to see physicians addicted to habits which they discountenance in others; it shows, if nothing more, that they are believers in the old maxim, that it is *one* thing to preach, and *another* to practice.

25. I dislike to see an aristocracy of feeling, or exclusiveness, existing among physicians, founded wholly upon the possession of wealth, irrespective of true merit in medical science: it follows the too common idea, outside of the profession, that the worship of the "molten calf" should take the precedence.

I will not pursue this subject further under this head, but in a subsequent number will give what I like to see, or the fairer portion —the real foreground of the picture. B.

Stomatorrhœa Vicarious to the Menses.—Dr. Wood made the following statement: "During my last term of service in the Pennsylvania Hospital, a case of stomatorrhœa occurred, which appears to me worthy of notice. The patient was a woman, of about twenty-five years of age, in other respects apparently in good health. She had for three months been affected with a very profuse and disagreeable discharge from the mouth, which she herself supposed to proceed from the stomach. I soon, however, convinced myself that the liquid discharged was a mixture of saliva and a mucoid secretion from the lining of the mouth and fauces. It was nearly colorless, somewhat viscid, and of an unpleasant odor and taste, and appeared to be constantly flowing. As there was evidence of some inflammation of the mucous membrane, I considered the case one of simple chronic stomatitis, and treated it accordingly, both by general and local remedies, for a considerable time, but without the slightest advantage. My attention having at length been directed to the menstrual function, I found that it had been arrested about the same time with the occurrence of the discharge from the mouth. Thinking that the two affections might be connected, I put the patient on the use of aloes and the pill of carbonate of iron, with the hot hip-bath daily, which apparently had the effect of restoring menstruation, after which the affection of the mouth ceased immediately. This case may prove useful, if in no other way, by inducing an early inquiry into the state of the menstrual function under similar circumstances"—*Transactions of the College of Physicians of Philadelphia.*

Dr. Young, of Edinburg, reports the successful treatment of a number of cases of hydrocele, by Simpson's plan with the iron wire seton. No more inflammation is said to be excited by the presence of the wire, than is necessary for the adhesion of the walls of the sack.

Prof. George Regnoli, of the school of Florence, died recently. He was one of the most celebrated operators in Italy, having been the successor of the most celebrated Vacca Berlingheri at the University of Paris.

Different Modes of Performing Lithotomy in the English Hospitals.—A large majority of English surgeons employ the ordinary lateral method of lithotomy on a curved staff. There has been, however, a considerable disposition to endeavor to improve on it of late years. The medium plan, so strongly recommended by Mr. Allarton, has been tried by not a few London surgeons, and amongst provincial ones has found a warm advocate in Mr. Teale of Leeds. At the London Hospital it was first adopted by Mr. Ward, about two years ago, and since then has been employed by his colleagues, Mr. Critchett and Mr. Gowland, each in a single instance. All the three patients were children; all recovered well, and in all it was considered that much less than the usual amount of bleeding took place. At Guy's Hospital, Mr. Cock has performed median lithotomy several times, and Mr. Erichsen has done the same at University College Hospital, both surgeons being, we believe, well satisfied with its results. On all hands it is considered to be best adapted for children and for small stones. At St. Barthelomews, Mr. Lloyd still continues to operate in all cases by his recto-urethral (median) method, which we described in detail when he first adopted it in 1853. He informs us that he has not yet lost a case after it, and considers it decidedly preferable to the lateral operation. His colleagues, however, without exception, we believe, always employ the latter. At the Metropolitan Free, Mr. Hutchinson always employs his rectangular catheter-staff, and considers that he obtains great advantage from it. The same instrument has been employed at King's College, by Mr. Lee, but it is not, as far as we observe, in use at any other hospital. In a recent instance in which the calculus was of large size, Mr. Hutchinson injected the bladder with oil instead of water, in the hope of facilitating the dilatation of the parts.

With regard to the median operation as advised by Mr. Allarton, it is universally admitted to be adapted only for small calculi. Now Mr. Lloyd's experience during the last few years has quite proved that when the anterior commission of the sphincter ani is cut clean through from the perineal wound, there is no danger of the part not healing. Might it not be well, therefore, to adopt this measure whenever, after the usual median incisions, the stone has been reached and has been found too large for removal? Mr. Lloyd's operation gives abundance of room.—*London Med. Times.*

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